# DOCUMENT RESUME

ED 240 714 EA 016 481

| | |
|---|---|
| AUTHOR | Loucks, Susan F.; And Others |
| TITLE | Portraits of the Changes, the Players, and the Contexts. A Study of Dissemination Efforts Supporting School Improvement. People, Policies, and Practices: Examining the Chain of School Improvement, Volume II. |
| INSTITUTION | Network of Innovative Schools, Inc., Andover, Mass. |
| SPONS AGENCY | Department of Education, Washington, D.C. Office of Planning, Budget, and Evaluation. |
| PUB DATE | 82 |
| CONTRACT | OE30-78-0527 |
| NOTE | 250p.; For related documents, see EA 016 480-489. |
| AVAILABLE FROM | Publications, The NETWORK, Inc., 290 South Main Street, Andover, MA 01810 ($18.00; 10-volume set of entire study, $150.00). |
| PUB TYPE | Reports - Research/Technical (143) |
| EDRS PRICE | MF01 Plus Postage. PC Not Available from EDRS. |
| DESCRIPTORS | Block Grants; Educational Development; *Educational Improvement; *Educational Innovation; Elementary Secondary Education; *Federal Aid; *Federal Programs; Government School Relationship |
| IDENTIFIERS | Bureau of Education for the Handicapped; Elementary Secondary Education Act Title IV C; National Diffusion Network |

ABSTRACT

Based on a local site sample of 146 school districts, this volume (the second in a series of 10) describes school improvement efforts supported by 4 different federal strategies and representative programs: interpersonal linkage of validated practices (National Diffusion Network), commercial distribution (Bureau of Education for the Handicapped Market-Linkage Program), state administration of dissemination (ESEA Title IV-C Adoption Grants), and Local Development and Invention (ESEA Title IV-C Development Grants). Characteristics of the innovative practices, the people involved, and the contexts in which they occur are discussed, along with contributions of school personnel, local and external facilitators, and other sources of assistance. The outcomes from involvement in improvement efforts are reported, ranging from extent of use of the practices, to student, teacher, and school benefits, to institutionalization. Assistance from outside the school district, most often from external facilitators funded by federal programs, was the key to preparing and supplying teachers to use the new practices and encouraging building and district support. (TE)

***********************************************************************
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
***********************************************************************

# People, Policies, and Practices: Examining the Chain of School Improvement, Volume II

ED240714

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY
The Network

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

# Portraits of the Changes, the Players, and the Contexts

EA 016 481

# Volume II

## Portraits of the Changes, the Players, and the Contexts

Susan F. Loucks
Pat L. Cox
Matthew B. Miles
A. Michael Huberman
Jeffrey W. Eiseman

---

A STUDY OF DISSEMINATION EFFORTS SUPPORTING SCHOOL IMPROVEMENT

David P. Crandall, Ed.D.
Principal Investigator

The NETWORK, Inc.
Andover, Massachusetts

Copyright © 1982 by The NETWORK, Inc.

The research referred to in this document was conducted under contract #OE30-78-0527 with the U.S. Department of Education, the Office of Planning, Budget and Evaluation. The opinions expressed are those of the authors and do not necessarily reflect the position or policy of the Department of Education, and no endorsement by the Department should be inferred.

# PREFACE

The Study of Dissemination Efforts Supporting School Improvement was a comprehensive, three-year examination of a broad spectrum of federal and state dissemination activities. It included a close look at selected strategies designed to improve schools by promoting the adoption and use of new educational practices developed with federal support. Sponsored by the Office of Planning and Evaluation of the U.S. Department of Education, the study was conducted by The NETWORK, Inc., in collaboration with several other research and development organizations, including the University of Texas' R&D Center for Teacher Education, the American University's Knowledge Transfer Institute, the Center for Policy Research and UCLA's Center for the Study of Evaluation.

The study examined four distinct levels of the educational system: federal, state, external agent, and local. A "zoom lens" design began with an overview of forty-five programs in the U.S. Department of Education that engaged in dissemination or dissemination-related activities. Fifteen of these programs were selected for in-depth analysis at the federal level. At the state level, we examined dissemination activities in ten states representative of the continental forty-eight.

Four strategies, each reflected in a selected federal program, were chosen for in-depth investigation at the local level. The strategies, and their programmatic exemplars, are;

- Interpersonal Linkage of Validated Practices, exemplified by the National Diffusion Network (NDN), including its ESEA Title I subnetwork
- Commercial Distribution, exemplified by the Bureau of Education for the Handicapped Marketing Program
- State Administration of Dissemination, exemplified by ESEA Title IV-C Adoption Grants
- Local Development/Invention, exemplified by ESEA Title IV-C Development Grants

A close look at 146 schools and school districts in the ten states, whose improvement efforts were supported by one of these programs, allowed us to answer three important questions:

1. To what extent are new practices supported by the federal programs being implemented in schools?
2. What factors influence successful implementation?
3. How are policies, conceived at one level, implemented at other levels?

Because three of the four programs chosen rely on implementing practices developed outside the local setting, we were interested in the vehicles employed by the programs for dissemination, particularly the assistance provided by external agencies and individuals.

Focusing-in the lens one more time, we conducted an intensive field study of twelve of our local sites over the course of a school year. Here, we were able to examine the interpersonal and organizational dynamics surrounding implementation as school people worked to incorporate innovative practices.

The study as a whole was a massive effort that required the energies and resources of countless people. Altogether, we:

- interviewed and surveyed over 5,000 educators;
- accumulated over 1500 hours of interview tapes;
- spent over 700 person-days "on the road;"
- made approximately 150 observations; and
- analyzed over 400 documents.

The three years were spent in design (Year 1), data collection (Years 1 and 2), and data analysis (Years 2 and 3).

The master report, People, Policies, and Practices: Examining the Chain of School Improvement, consists of ten volumes which describe the results of the study. Volume I (Setting the Stage for a Study of School Improvement) sets the study within a framework of federal school improvement policies and past studies of these policies. The objectives, design, and research methodologies used in the study are also described.

Volume II (Portraits of the Changes, the Players, and the Contexts) describes what was found in the 146 school districts that comprised our local site sample. Characteristics of the people, the innovations, and the settings are reported, as are the contributions of external assistance and the outcomes accrued from involvement in school improvement.

Volume III (Models of Change) introduces the causal models of the school improvement process that helped us determine what factors influenced success. The findings are reported for several outcomes at both the organizational (school) and individual (teacher) level.

In Volume IV (Innovation Up Close: A Field Study in Twelve School Settings), we examine the dynamics of twelve districts -- varying in experience with the new practices, in community type, and in the scope of their efforts -- involved in improvement efforts supported by the National Diffusion Network or ESEA Title IV-C

Local Development Grants. The volume provides an in-depth picture of the motivations, behaviors and aspirations of school people as new practices are implemented and maintained.

Volumes V, VI and VII analyze the government's role in dissemination for school improvement. In Volume V (Dissemination for School Improvement: An Analysis of Nine Federal Education Programs), we profile nine widely different federal programs sponsored by the then U.S. Office of Education. The volume examines the assumptions underlying the programs, and how these shaped each program's dissemination strategy.

In Volume VI (Dissemination at the National Institute of Education: Contending Ideas about Research, Practice, and the Federal Role), six federal dissemination programs funded by the NIE are examined. We tell the story of the programs' emergence, implementation, and -- to the degree possible -- impact, and discuss implications of the programs for the federal role in dissemination.

In Volume VII (Configuration of Federal and State Dissemination Activities), we present a comparative analysis of federal-state relationships for dissemination and school improvement in our ten sample states. We examine the impact of federal initiatives and other critical influences on the roles and operations of state education agencies.

Volume VIII (The Infrastructure of Innovation: The Case of the National Diffusion Network) examines the communication and rewards structure of a single federal program -- the National Diffusion Network. We examine the NDN as a decentralized service delivery system which has evolved to a grass-roots effort with greatly reduced dependence upon federal leaders for direction and control. Network analysis, based on a census of all members and adjuncts of the NDN, provides interesting insights into a unique federal program.

Volumes IX and X summarize our efforts. Volume IX (Implications for Action) integrates findings from all components of the study, and discusses implications for policy and practice at all levels of the educational enterprise. Volume X, our Executive Summary, provides a distillation of study methods and findings for a general audience, as well as an annotated bibliography of the report series and related study documents.

# ACKNOWLEDGEMENTS

The Study of Dissemination Efforts Supporting School Improvement engaged literally a cast of thousands. At the peak of activity, it involved some 5,000 educators from all parts of the country, with a wide range of roles and responsibilities, whose only commonality was the desire to improve the education of our nation's youth. Although it is impossible to personally thank everyone, we pause here to acknowledge their important contributions.

Our Project Officer: Ann Bezdek Weinheimer, for her superb guidance and unending support;

Our Policy Advisory Group: Dave Clark, Ellie Farrar, Michael Fullan, Hendrik Gideonse, Egon Guba, Milbrey McLaughlin, David Wiley, and Ward Mason, for their help in conceptualization and design, and their thorough and honest feedback;

Our Senior Consultants: Jeff Eiseman, Gene Hall, Ann Lieberman, Matt Miles, and Bill Schmidt, for keeping us on track early in the study, and contributing substantively to design, analysis and reporting;

Our NETWORK Study Team: Charles Thompson, Jim Taylor, Joyce Bauchner, Glenn Shive, Judy Taylor, Susan Loucks, and Pat Cox for late nights and longer days, and contributing a significant piece of their lives;

Our Subcontractor Teams: Gene Hall, Susan Loucks, Archie George, and Susan Heck at the University of Texas R&D Center for Teacher Education; Ron Havelock, Pat Cox, Michael Huberman, Gwen Moore, Nanette Levinson and JoAnn Goldberg at the American University Knowledge Transfer Institute; Matt Miles and Beverly Taylor at the Center for Policy Research; Jay Guenon and Bill Paddock at Lam, Inc; and Adrianne Bank and Nancy Snidman at the UCLA Center for the Study of Evaluation, for their commitment to the spirit and hard work of collaboration, and their significant contributions to components of the study;

Our Field Coordinators and Researchers from each organization: David Zacchei, Wendy Gelberg, Marian Grogan, Renee Lerche, Mike Mayo, Paulette Meleen, Larry Vaughan, Stone Wiske, Barbara Abeles, Warren Berube, Harvey Bondar, Debbi Miles and Susan Solat at The NETWORK; Lila Oshatz, Evelyn Gilbreath, Eddie Henderson, Vivian Smith, Suzie Stiegelbauer, and Margaret Valentine at Texas R&D; Pat Cox, Dawn Badrick, Nancy Smith, Sheila Wolfe and Ann Kelleran at the Knowledge Transfer Institute, for their dedication to "bring'em (the data) back alive" in the face of thousands of miles of travel, coping with balky tape recorders, living out of suitcases and strange motel rooms for weeks at a time, and for representing us in a thoroughly professional way to new and unfamiliar folks day after day;

Our NETWORK Support Team: Pat Bales, Margaret Broderick, Ronna Coppola, Kory Hellmer, Clif Lund-Rollins, Elsa Martz, Nancy Lund, Nick Thorkelson, Annmarie Lenson, and Ruth Anne Shepard who edited, typed, organized, copied, served, drew, retyped, collated, hustled, and cleaned up after us times too numerous to mention, for all of that and more;

And finally, to the people who other studies label "respondents" but whom we considered and related to as "collaborators": over 4,000 teachers, nearly 400 building and district administrators, 100 people in external assistance roles, 50 personnel in ten state departments of education and 100 federal program staff, for their dedication to making schools a better place for people, and helping us learn the good news:

SCHOOL IMPROVEMENT EFFORTS ARE ALIVE AND WELL
IN SCHOOLS ACROSS THE U.S.!

And, on a more personal note:

They said it couldn't be done; parts of it, yes. The whole humongous thing? No way! But we believed, we persevered, and we succeeded.

Managing (producing?) an enterprise of this scale and complexity was not unlike being entrusted with a string of race horses while also being expected to efficiently operate race tracks all over the country. One's charges must run, sometimes for practice, sometimes in claim races, sometimes for fun, and sometimes for substantial purses. At the tracks, stands must be cleaned, popcorn purchased, receipts counted, special events trumpeted, sound systems repaired. Oh yes, add to this the necessity of producing a comprehensive story of each season's successes (and failures), with appropriate statistical detail for the aficionados and photos for the occasional attendee. Perhaps such images will help you connect with the range of reactions I have had to this point, when all that remains of the season is the final manuscript which down-plays the thrills and recalls the tribulations.

Although flashes of Hercules and his labors in the stables come to mind, as do painful recollections of the occasional reluctance of the imported studs to perform as desired, and more than a few false breaks at the gate, overall I am immensely satisfied with both the process and the product of our collective odyssey. On balance, it was a frolic with a wonderful group of thoroughbreds.

All the players in our production performed admirably; their contributions were manifold. Three are worthy of special mention, one whose contribution was the necessary catalyst at the front-end, enabling our adventure to commence and continue; one whose firm hand kept us on our course; and another whose contribution at the back-end ensured the successful conclusion and chronicling of our journey with style and substance. My very special thanks to:

Ann Bezdek Weinheimer, whose courage in championing our unconventional approach launched us on our journey with confidence. During the study, Ann was our trailblazer and guide through the bureaucratic thickets. We benefited mightily from her detailed and hard-hitting critiques, her unwavering support for our efforts through the low moments and her praise at the high ones. Perhaps most of all, we treasure her belief in us and her infinite patience.

Joyce Bauchner, whose truly special ability moved us from abstract conception to earthly operation. Her commitment to task execution and consummate attention to detail served the study better than the best Master Sergeant. (Plus she's incredibly bright and doesn't smoke cigars.) Her formal titles and responsibilities belie the breadth and depth of her contribution to thinking up and working through this massive endeavor. As she remarked more than once, "Well, no one has ever done this before, but let's get on with it." And we did. My plans and our various teams' intentions, difficult as they were to arrive at, were just the first step. Seeing that they were carried out, by dispersed groups in six locations, on time and budget and in keeping with the overall conception was up to Joyce. Without her we'd still be picking up the stragglers and searching for the lost interview tape.

Susan Loucks, whose capacity for concentration, sustained high quality output and tolerance for my idiosyncracies is surpassed only by her unparalleled modesty, calm and good humor, is the single most important reason that the complex innovation of this study is represented through its master report series and numerous other publications. Individual authors have each made significant contributions in their own right. Weaving individual strands of reasoning into a coherent fabric that is both sturdy and stylish stands as the latest in a string of behind the scenes contributions that have been too often unacknowledged. Hers has been the longest and hardest race of all, because it's been run after the others have bedded down and the spectators have left the track. Had this been a race for the roses, the bouquet would belong to Susan.

Each has contributed in a special way to my realizing a major dream. From a field of exceptionally talented thoroughbreds, they have been a trio of true believers. Without these three, it wouldn't have happened; with them, I would try anything.

David P. Crandall, Ed. D.
Principal Investigator

# SUMMARY: VOLUME II

The purpose of Volume II is to describe what we found occurring in schools where improvement efforts supported by four federal strategies were underway. We answered two questions:

- In our sample of 146 schools that reportedly were engaged in improvement efforts, were those efforts, in fact, successful?

- What factors were present, or had been present, at these sites that might have contributed to this success (or lack thereof)?

We answered the first question by defining several "success" indicators and reporting their presence or absence. Of course, the second question was more difficult to answer, since our findings are largely descriptive, with relationships reported in only a few cases. But from our pictures of the settings, the people, and the practices that were implemented, we are able to suggest some conditions that might have contributed to success.

The outcomes we measured ranged from extent of use of the practices, to student, teacher, and school benefits, to institutionalization. Our schools scored remarkably high on most outcomes. We found significant changes in classrooms from what teachers had been doing before implementation. We found a large degree of fidelity to the developer's version of the new practices. A large majority of our teachers reported benefits to students, as well as to their own professional growth. Only institutionalization -- the existence of procedures and regulations to ensure ongoing use of the practice -- was not high overall. This we attribute to the fact that the schools spent their time and resources on the more immediate tasks of getting the practices implemented. As often happens, the interest and resources waned as use become routine, and only limited attention was given to establishing an ongoing support system.

Originally we expected to find some differences in our sample, according to which federal program supported the particular improvement effort. We found instead that there were typically more differences within programs than between them. Only a few outcome differences occurred. For example, practice change was high for all sites except those using BEH and non-Title I NDN practices. Student impact was reported high for all but BEH sites, and institutionalization was only moderate, except for the Title I NDN sites, where it was quite high.

The people involved in school improvement efforts appeared to hold the key to this pattern of overall success. Teachers and administrators alike reported high levels of commitment, which were exhibited in a wide range of activities related to use of the new practices. We found building principals showing leadership styles that incorporated teachers' needs and opinions into the ongoing structure of the school. The role of local facilitator (a coordinator, project director, or curriculum specialist at the district level) emerged as an important advocate, trainer, and ongoing problem-solver. Assistance from outside the school district, most often from external facilitators funded by the federal programs, was key to preparing and supplying teachers to use the new practices, and encouraging building and district support. The configurations of assistance found were unique to each site, but most often involved a remarkable number of players and activities devoted to the use of new practices.

The practices themselves varied widely in their content forms, complexity, pedagogical approach, and requirements for implementation. The demographic characteristics of the schools also varied, with a wide range in size, wealth, community make-up, level of students served, and geographic location. With such variation, we found uniformly large amounts of staff cohesiveness, cooperation, and responsiveness from higher levels reported by all levels of respondents.

Our snapshot of the people, practices, and contexts is complete. In addition, we have a clear indication that the efforts made by these schools to improve were being met with success, as defined by a number of different outcome measures. Volume III puts the ingredients together to determine which had the most influence on success, and Volume IX integrates the findings in recommendations for practice.

# VOLUME II: PORTRAITS OF THE CHANGES, THE PLAYERS, AND THE CONTEXTS

## Table of Contents

Page

Chapter I: The Players . . . . . . . . . . . . . . . . . . 7

Section 1: Teachers as the Primary Players. . . . . . . . 7
Section 2: Building and District Level Administrators . . 23
Section 3: External and Local Facilitators . . . . . . . 43

Chapter II: Local Schools -- The Backdrop for Improvement. . . . . . . . . . . . . . . . . . . . 93

Chapter III: New Practices -- The Vehicles for School Improvement. . . . . . . . . . . . . . . . . . . . 105

Chapter IV: The Outcomes of School Improvement Efforts . . . 114

Chapter V: Our Learnings. . . . . . . . . . . . . . . . . . 150

# List of Tables

Page

Table 1. Extent of Efficacy Reported by Teachers . . . . . 11
Table 2. Priority for Use of the Practice . . . . . . . . . 12
Table 3. Teachers' Sense of Ownership in the Practice. . . 13
Table 4. Teachers' Extent of Control Over Use of the Practice. . . . . . . . . . . . . . . . . . . . . . . 14
Table 5. Teachers' Perceptions of Readiness for Practice before Implementation . . . . . . . . . . . . . . 16
Table 6. Distribution of Time Spent in Practice-Related Classroom Activity . . . . . . . . . . . . . . . . 19
Table 7: Distribution of Time Spent on Practice-Related Materials . . . . . . . . . . . . . . . . . . . . 19
Table 8. Distribution of Time Spent in Practice-Related Training . . . . . . . . . . . . . . . . . . . . . 20
Table 9. Distribution of Time Spent on Practice-Related Evaluation. . . . . . . . . . . . . . . . . . . . 21
Table 10. Distribution of Time Spent on Practice-Related Communication . . . . . . . . . . . . . . . . . . 21
Table 11. Distribution of Administrators in the Sample. . . . . . . . . . . . . . . . . . . . . . . 24
Table 12. Distribution of Implementing and Non-Implementing Administrators by Site. . . . . . . . . . . . . . 25
Table 13. Distribution of Implementing Administrators by Program. . . . . . . . . . . . . . . . . . . . . 26
Table 14. Distribution of Non-Implementing Administrators by Program. . . . . . . . . . . . . . . . . . . . . 27
Table 15. Number of Sites with Local Facilitators and Number of Local Facilitators for a Given Type of Administrator . . . . . . . . . . . . . . . . . . 29
Table 16. Distribution of Local Facilitators by Program . . . . . . . . . . . . . . . . . . . . . . 30
Table 17. Readiness: The Extent to Which Items were in Place in the School Before Implementation as Reported by Administrators, Local Facilitators, and Teachers. . . . . . . . . . . . . . . . . . . 34
Table 18. Forms of Assistance on a Day-to-Day Basis Provided by Administrators and Local Facilitators. . . . . . . . . . . . . . . . . . . 36
Table 19. Administrators' Long-Term Strategies for Assistance. . . . . . . . . . . . . . . . . . . . 37
Table 20. Forms of Assistance Provided by Principals as Reported by Teachers, Compared to Principals' Reports of Assistance . . . . . . . . . . . . . 39
Table 21. Percentage Distribution of Principals Degree of Leadership. . . . . . . . . . . . . . . . . . . . 40
Table 22. Percentage Distribution of Principal's Interactiveness in Management Style . . . . . . . 41
Table 23. Number of External Facilitators by Major Role Groups in Three Federal Programs. . . . . . . . . 46
Table 24. External Facilitators Tolerance for Ambiguity . . . . . . . . . . . . . . . . . . . . . 48

List of Tables (continued)

Page

Table 25. Number of Other Job Titles of External Facilitators. . . . . . . . . . . . . . . . . . . . 51
Table 26. Sources of Job Satisfaction of External Facilitators. . . . . . . . . . . . . . . . . . . . 54
Table 27. Sources of Job Dissatisfaction of External Facilitators. . . . . . . . . . . . . . . . . . . . 55
Table 28. External Facilitator Strategy . . . . . . . . . . 57
Table 29. Specific Product, Product Choice, and Capacity Orientations . . . . . . . . . . . . . . 59
Table 30. Specific Product versus Product Choice Orientation . . . . . . . . . . . . . . . . . . . . 60
Table 31. Types of Professional Colleagues. . . . . . . . . 61
Table 32. Local/Cosmopolitan Orientation. . . . . . . . . . 62
Table 33. Types of Adaptations Allowed by External Facilitators. . . . . . . . . . . . . . . . . . . . 63
Table 34. Five Categories of External Facilitator General Client Assistance Activities. . . . . . . . . . . 64
Table 35. General Client Assistance Activities of External Facilitators . . . . . . . . . . . . . . . . . . . 66
Table 36. Four Categories of External Facilitator Ongoing Role Maintenance Activities . . . . . . . . . . . 68
Table 37. Ongoing Role Maintenance Activities of External Facilitators. . . . . . . . . . . . . . . . . . . . 70
Table 38. Familiarity with the Practice at the Site by Five Role Groups. . . . . . . . . . . . . . . . . 74
Table 39. External Facilitator and Local Facilitator Assistance to Local School Sites. . . . . . . . . 76
Table 40. External Facilitator Assistance Factors . . . . . 80
Table 41. Amount of Assistance Provided by External and Local Facilitators. . . . . . . . . . . . . . . 82
Table 42. External Facilitator Assistance to Local Site by Program. . . . . . . . . . . . . . . . . . . 82
Table 43. Configurations of Identified External and Local Facilitators by Program . . . . . . . . . . . . 84
Table 44. Comparison of Amounts of External Assistance Given to Sites Having Only External Facilitators with Sites having Both External Facilitator and Local Facilitator Present . . . . . . . . . . 85
Table 45. Comparison of Amounts of Local Assistance Given to Sites Having Only External Facilitators with Sites Having Both Local and External Facilitators . . . . . . . . . . . . . . . . . . . 88
Table 46. Teacher Change in Practice (by site) by External/Local Facilitator Configuration. . . . . 90
Table 47. Distribution of District Size (Number of Students) in the Sample . . . . . . . . . . . . . . . . . . 93
Table 48. Distribution of School Size (Number of Students) in the Sample . . . . . . . . . . . . . . . . . . . 94
Table 49. Distribution of the Total Survey Sample Among the Quantifiable Characteristics Ratings. . . . . . 108

## List of Tables (continued)

Page

Table 50. Comparison of Program Groups by Practice Characteristic Means . . . . . . . . . . . . . . . 111
Table 51. Distribution of Change in Practice Scores for Teachers . . . . . . . . . . . . . . . . . . . . 118
Table 52. Distribution of Extent of Implementation Scores for Teachers. . . . . . . . . . . . . . . . . . 119
Table 53. Distribution of Fidelity Scores for Teachers. . . 120
Table 54. Distribution of Scores for Practice-Specific Mastery . . . . . . . . . . . . . . . . . . . . . 122
Table 55. Distribution of Scores on Practice-Related Mastery . . . . . . . . . . . . . . . . . . . . . 123
Table 56. Net Evaluation of the Practice (Computer Score) by Teachers, Administrators, and Local Facilitators. . . . . . . . . . . . . . . . . 126
Table 57. Kinds of School-Level Organizational Changes Reported by Administrators. . . . . . . . . . . . 131
Table 58. Plans for Continuation as Reported by Teachers. . 133
Table 59. Plans for Continuation as Reported by Administrators. . . . . . . . . . . . . . . . . . . 134
Table 60. Comparison of Teacher and Administrator Responses Related to Plans for Continuation of the Practice . . . . . . . . . . . . . . . . . . 134
Table 61. Responses of Different Role Groups to Indicators of Institutionalization. . . . . . . . . . . . 136
Table 62. Distribution of Scores on Institutionalization for Teachers and Administrators. . . . . . . . . 137
Table 63. Summary of Program Differences in Attained Outcomes . . . . . . . . . . . . . . . . . . . . . 148

## List of Figures

Figure 1. Expected Findings for School Improvement Efforts . . . . . . . . . . . . . . . . . . . . . . 4
Figure 2. Relationships Among Practice Characteristics. . . 112
Figure 3. The Outcomes of School Improvement Efforts. . . . 115
Figure 4. Example of a Component Checklist. . . . . . . . . 117
Figure 5. Levels of Use of the Innovation: Typical Behaviors . . . . . . . . . . . . . . . . . 121
Figure 6. Predictions of Institutionalization (Teacher Perception) . . . . . . . . . . . . . . . . . . . . 142
Figure 7. Predictions of Institutionalization (Administrator Perception) . . . . . . . . . . . . . . . . . . . . 142
Figure 8. Predictions of Attitude to Future School Improvement . . . . . . . . . . . . . . . . . . . 143

# VOLUME II: PORTRAITS OF THE CHANGES, THE PLAYERS, AND THE CONTEXTS

In rural Appalachia, preschool children from disadvantaged homes (many of which are trailers) attend an incredibly rich, dynamic learning center where they develop their cognitive and motor skills. Elementary teachers marvel at how much better prepared the children are for school than those who arrived at their doorsteps before the center was established.

* * * * *

Maggie Smith, a federally-funded California-based trainer for an innovative mathematics program, has a travel schedule that would kill a horse. Three days of training for 40 teachers two awareness sessions, follow-up for earlier trainees, assorted paperwork, observations, and logistical arrangements are all in a week's work, covering two states and three school districts. And it's not over yet. Having landed on the east coast, she'll work her way back home, with next week filled with a similar roster of activities. "Was it easier back when I was teaching?" she wonders, then concludes, "Yes, but I'm reaching so much further now."

* * * * *

Black middle school children in this major metropolitan area rarely had good reasons to come to school. But since the social studies department received the federal development grant, student attendance is up, vandalism has all but halted, and a new sense of community permeates the school. In their classes, students engage in research and debate, trying to understand the intricacies of socially relevant historical events, and linking their outcomes to everyday life.

* * * * *

In 1980, Allan Adams had taught science for eight years and was wondering if he could put up with the lack of challenge and inspiration of his teaching environment. A chance meeting with a state-funded trainer for a new chemistry curriculum engaged his curiosity and interest. Two years later, not only are his chemistry classes thriving, but in his new role as science department chair, he has helped teachers infuse the excitement and experiential learning of the chemistry curriculum throughout their science offerings.

School improvement is a function of educators in many roles, interacting around new practices within their own unique settings. These snapshots capture a little of the energy and excitement that can result when improvement efforts "catch on."

In this volume, we describe the school improvement efforts we examined that were underway in 146 school districts spread widely across the country. We portray the people (their roles, attitudes, experiences), the new practices they implemented, and the settings in which they worked. And we explore important questions about the effects of the new practices: to what extent were they actually used, and what impact did they have on teachers, students, and schools?

This volume has five chapters. The first three correspond to the critical ingredients for school improvement -- the people, the contexts, and the innovative practices. The fourth describes outcomes derived from the interactions of these ingredients, and the fifth summarizes our learnings. Briefly, each chapter includes:

Chapter I: The Players. This chapter describes three sets of players: teachers, building and district level administrators, and external and local facilitators. It answers these questions:

- Who are they?
- What are their professional characteristics?
- What are their attitudes towards the new practices they were implementing?
- How do they play out their roles in the school improvement effort?

Chapter II: The Contexts. This section describes the local settings in which the improvement efforts occurred. It answers these questions:

- What are the demographics?
- What is the nature of the psychological climates?
- What kinds of support exist for the new practices?
- What are the experiences of the settings with school improvement efforts?

Chapter III: The Practices. Here we describe the innovative practices that were adopted in the local settings. We answer these questions:

- What is the scope of the practices within the schools and districts?
- How complex, prescriptive, and precise are the practices?

Chapter IV: The Outcomes. This chapter describes a variety of outcomes of the school improvement efforts. It answers these questions:

- To what extent are the new practices actually implemented?
- Which attitudes have resulted from use of the practices?
- What are the impacts of the practices?
- Are there plans for continuation and evidence of institutionalization?

Chapter V: Our Learnings. This chapter summarizes what we learned about school improvement as we examined the many elements involved in making these efforts work.

Our 146 school districts were places where federal funds had been used to support school improvement, largely through dissemination activities. As we describe in detail in Volume I, we selected four widely different federal school improvement strategies, and within each, chose to focus on a single federal program. These strategies and their program exemplars are:

- Interpersonal Linkage of Validated Practices, exemplified by the National Diffusion Network (with ESEA Title I Dissemination as a secondary example)
- Commercial Distribution, exemplified by the Bureau of Education for the Handicapped Marketing Program
- State Administration of Dissemination, exemplified by ESEA Title IV-C Adoption Grants
- Local Development/Invention, exemplified by ESEA Title IV-C Development Grants

Beginning with the assumptions underlying the programs, we asked ourselves, "what would be happening in schools whose improvement effort had been successfully supported by each program?" We considered the roles and activities of the people involved, the practices they would be implementing, the help they would receive, and the processes they would go through. Finally, we considered what outcomes would result. For many of these factors, our guesses were the same across programs; for others we expected program differences. Figure 1 summarizes our deliberations (note that all the starred (*) statements are the same for all programs).

As this volume unfolds, it will become obvious where our expectations were met and where they were not. It is important to note up front, however, that we found program differences largely unimportant. We developed causal models of the improvement

FIGURE 1: Expected Findings for School Improvement Efforts

| PRACTICES | PEOPLE | | | CONTEXT | IMPLEMENTATION PROCESS | OUTCOMES |
|---|---|---|---|---|---|---|
| | TEACHERS | BUILDING/DISTRICT ADMINISTRATORS | EXTERNAL FACILITATORS | | | |
| INTERPERSONAL LINKAGE OF VALIDATED PRACTICES | | | | | | |
| *1. Practices in use in schools.<br>2. Combination of new materials with new strategies.<br>3. Used regularly.<br>4. Used with fidelity to key components. | *1. Motivated to use the new practice.<br>*2. Use the new practice.<br>*3. Commitment to the new practice.<br>*4. Benefit from the new practice.<br>5. Spend time in classroom use, organizing, planning, evaluating, training. | *1. Supportive of teachers.<br>2. Help identify needs and new practices.<br>3. Arrange or allow for training. | 1. Work directly with school people (most likely teachers) in training.<br>2. Another type assister helps assess needs, identify practice, arrange for on-site training.<br>3. Post-training assistance and/or monitoring.<br>4. Assistance perceived as useful by school people. | *1. Environment open and conducive to change and innovation.<br>2. Some structures and procedures in place to facilitate decision-making planning, and ongoing functioning. | 1. Need for different activities as implementation progresses: need assessment, practice identification, training, follow-up, monitoring. | 1. High change in classroom practice.<br>2. High fidelity in use of the practice.<br>3. High impact on students.<br>4. Many benefits to teachers.<br>5. High institutionalization. |
| COMMERCIAL DISTRIBUTION | | | | | | |
| *1. Practices in use in schools.<br>2. New materials only.<br>3. Could be used infrequently. | *1. Motivated to use the new practice.<br>*2. Use the new practice.<br>*3. Commitment to the new practice.<br>*4. Benefit from the new practice.<br>5. Spend time in classroom use, organizing, planning, evaluating. | *1. Supportive of teachers.<br>2. Help identify needs and new products. | 1. Work with administrators to orient them to benefits of product. No assistance after sale. | *1. Environment open and conducive to change and innovation.<br>2. Functioning communication channels. | 1. No implementation activities planned or carried out. | 1. Low to medium change in classroom practice<br>2. Low fidelity to components of the new practice.<br>3. Medium impact on students.<br>4. Some benefits to teachers.<br>5. Low institutionalization. |

*statement is true of all programs studied.

BEST COPY AVAILABLE

FIGURE 1: Expected Findings for School Improvement Efforts (continued)

| PRACTICES | PEOPLE | | | CONTEXT | IMPLEMENTATION PROCESS | OUTCOMES |
|---|---|---|---|---|---|---|
| | TEACHERS | BUILDING/DISTRICT ADMINISTRATORS | EXTERNAL FACILITATORS | | | |
| STATE ADMINISTRATION OF DISSEMINATION | | | | | | |
| *1. Practices in use in schools.<br>2. Combination of new materials with new strategies.<br>3. Used regularly.<br>4. Used with fidelity to key components. | *1. Motivated to use the new practice.<br>*2. Use the new practice.<br>*3. Commitment to the new practice.<br>*4. Benefit from the new practice.<br>5. Spend time in classroom use, organizing, planning, evaluating, training. | *1. Supportive of teachers.<br>2. Help identify needs and new practices.<br>3. Arrange or allow for training. | 1. Work directly with school people (most likely teachers) in training.<br>2. Post-training assistance and/or monitoring.<br>3. Assistance perceived as useful by school people. | *1. Environment open and conducive to change and innovation.<br>2. Some structures and procedures in place to facilitate decision-making planning, and ongoing functioning. | 1. Need for different activities as implementation progresses: need assessment, practice identification, training, follow-up, monitoring. | 1. High change in classroom practice.<br>2. High fidelity in use of the practice.<br>3. High impact on students.<br>4. Many benefits to teachers.<br>5. High institutionalization. |
| LOCAL DEVELOPMENT | | | | | | |
| *1. Practices in use in schools.<br>2. Combination of new materials with new strategies.<br>3. Used regularly.<br>4. Adapted to the user's own situation. | *1. Motivated to use the new practice.<br>*2. Use the new practice.<br>*3. Commitment to the new practice.<br>*4. Benefit from the new practice.<br>5. Spend time in classroom use, organizing, planning, evaluating, developing materials and strategies, training. | *1. Supportive of teachers.<br>2. Develop and direct implementation of new practice. | 1. Outside experts might give training or consultation; no ongoing assistance.<br>2. Assistance perceived as useful by school people. | *1. Environment open and conducive to change and innovation.<br>2. Some structures and procedures in place to facilitate decision-making planning, and ongoing functioning. | 1. Implementation process would differ widely among users, with activities adapted to individual situations. | 1. High change in classroom practice.<br>2. Low fidelity in use of the practice.<br>3. High impact on students.<br>4. Many benefits to teachers.<br>5. High institutionalization. |

*statement is true of all programs studied.

BEST COPY AVAILABLE

process (discussed at length in Volume III) that asked, "what factors influence successful implementation?" When tested, the models showed few programmatic differences. Time and again, we found more variation within programs than between them.

For this reason, this volume rarely reports findings by programs. We do so in only two cases: first, in our discussion of assistance configurations, where programs differ widely and powerful implications can be drawn for policy and practice; and second, we look at several outcomes by program, to provide some understanding of "what you get for your investment." But overall, we report on the study as one of school improvement, where each site differs in its dynamics, but all share a goal of improving education.

One last note before beginning. We are looking at a special population, that of "adopters" (or in the case of Title IV-C, "developers") identified as such by the specific programs we studied. As noted in the sampling section in Volume I, we used a complex procedure to ensure that our sample was representative of these adopters (usually schools or school districts) that were listed by the programs as having made some kind of a commitment to use a new practice, some as many as six years before we arrived. Although a commitment had been made, we had no expectations[1] that those "adoptions" actually would have happened and would still be in place. We found that 73% were in place, and this 73% became our sample. Thus, the people and places we describe in this volume are where school improvement efforts took hold; in a sense they are "success stories." But we do not believe these are atypical. Since our sampling was as representative as possible of the real world, we propose that this sample describes nearly three-quarters of the "adoptions" of the school improvement strategies we studied.

The chapters that follow describe what we consider to be the important elements and characteristics of the school improvement efforts we studied. We do not attempt to provide every bit of information gained from every questionnaire and interview; rather, we summarize most of the data to provide the reader with a snapshot of the settings as we found them. For the variables that our causal modeling found to have significant impact on school improvement outcomes (as reported in Volume III), we provide more detailed information in tables of frequency distributions of scores. For the more technical reader, we have included such tables in the Appendix for all the additional variables we assessed, and we have referred to those tables by number in parentheses within the narrative.

---

[1] Note that the "expectations" described earlier were for successful efforts supported by these programs. Initially, we had no idea whether or not they had been successful.

# CHAPTER I: THE PLAYERS

In exploring the world of schools involved in improvement efforts, we found three distinct sets of players: teachers or other "first-line" users of the new practices; administrators at both the building and district levels; and individuals outside of the local setting whose task it was to link school people with external resources, usually but not exclusively made available through the four federal strategies we studied. In this section we profile these players: who they are, what they do, and how they feel about their involvement in the school improvement efforts.

## Section 1:

## Teachers as the Primary Players

### Who Are the Teachers?

In Volume I, we provided a detailed description of the sample and sampling procedures used in this study. Here we take a closer look at the type of teacher from whom we collected information and how we located them.

Our assumption going into the study was that actual users of new practices were major -- if not *the* major -- players in the game of school improvement. Since we were focusing on classroom practices, we assumed further that these would be teachers directly involved in use of the practice. The real world, as we always discovered, was not that simple.

Users of the practices we selected for study often were not "teachers" in the typical use of the word. Some were hearing specialists, guidance counselors, special education teachers, or tutors. But all met the definition:

> an individual who provides service directly to a student through the use of a curricular or instructional practice.

These individuals we call our "teachers."

As we collected data for the study, we found two types of teachers who were involved in the implementation of new practices. The first type of teacher interacted directly with students in using the practice or a major piece of the practice. For example, a fourth grade teacher uses a new science module as part of a science course, or a remedial reading teacher uses a new test to diagnose needs of the students. We refer to these people as *primary users* of the practice. The second type of teacher does not actually use the practice personally. This teacher's students are served by the practice and, therefore, the teacher indirectly experiences the benefits and disadvantages of its use. He or she typically has at least a rudimentary understanding of how the practice works. We refer to these teachers as secondary users. An example of a secondary user is Ms. Howard, a full time fourth grade teacher. Every morning several of Ms. Howard's students leave the class for an hour and go to Mr. Hawkins' class for special instruction with a new language arts curriculum. In this case Ms. Howard is a secondary user of the new language arts curriculum and Mr. Hawkins is a primary user.[2]

In addition to finding both primary and secondary users of the practice, we gathered information from:

- teachers who no longer were using the new practice, but had been in the recent past; and
- teachers who were not presently using the new practice, but had definite plans to do so in the near future.

Therefore all the teachers from whom we gathered information had either used a new practice in the past, were presently involved in using one, or were planning to use a new practice in the future.

In total we gathered information from 393 teachers across the 4 categories: 315 primary users, 55 secondary users, 15 past users, and 8 future users. Clearly, most teachers in our sample were those presently involved with the practice. (As we note later, we also collected data from entire school faculties, many of whom were not involved with the new practices, but could contribute to our assessment of school work climate. Building Work Climate Questionnaires were completed by 3,129 individuals in 138 schools.)

## How Did We Collect Our Information?

In Volume I we described our instrumentation in detail. Here we summarize how we collected data from the teachers. Field researchers conducted taped interviews of primary users, secondary users, and future users, employing the branching format of the User Interview. Past users who had used the practice within the last year were interviewed with the Dropped User Interview. This interview was virtually identical to the User Interview, except that questions were written in the past tense. After each interview all teachers, except secondary users, were given the User Questionnaire.

## What Information Did We Gather?

In the case of each set of respondents, we gathered information on those characteristics we thought would be most closely related to school improvement. The information fell into four broad categories:

---

[2] For those familiar with Title I and other programs for special needs children, what we are calling "secondary users" are typically called "sending teachers," and the programs with which they are involved are often called "pullout" programs.

- professional characteristics -- experience and professionalism of the respondent,
- attitudes -- opinions or dispositions toward the school improvement effort,
- knowledge -- information the respondent has about the new practice, resources, the behavior of others, etc., and
- behaviors -- actions the respondent takes to use or support use of the new practice.

The data presented in this section are organized around these concepts. Teachers' perceptions of such things as assistance received and the climate of the school are discussed in later sections. Here we first describe the professional characteristics of the teachers. Then we discuss teacher attitudes and knowledge as they relate to the implementation of the new practice. Finally, we describe the activities of the teachers as they engage in the process of school improvement.

## Professional Characteristics

Teachers in the study were assessed on three professional characteristics: experience as a teacher, professionalism as defined by various information-acquisition and professional development activities, and the degree to which they felt they could actually contribute to student learning (teacher efficacy).

We found that our teachers[3] ranged in teaching experience from 1 year to over 26 years. A large majority (63%) had 10 years of experience[4] or less, with an average of 10.2 years. So the sample is one of experienced teachers; most, however, are not anticipating the end of their teaching careers (Table 1.1.1).[5]

---

[3] Data reported here and in the remainder of this section come from 296 "primary users." Of the 315 primary users in our sample, 296 provided us with data complete enough to include in every distributive analysis. The remaining 19 had major information missing, e.g., a complete interview or a complete questionnaire was lacking. Responses from the secondary, past, and future users defined on page 8 also are not included in this figure.

[4] In this volume, where variable names are not used in headings and subheadings, they are underlined in the text.

[5] Tables cited at the end of discussions of each variable can be found in the Appendix.

We wanted some estimate of how "plugged in" teachers were to outside resources, how active they were in acquiring information that would contribute to improving their teaching. We saw this combination of activity and "cosmopolitanism" as an indication of professionalism. We suspected that there might be a relationship between the degree of professionalism and the outcomes of school improvement.

Four activity indicators were assessed: (1) attendance at professional meetings and conferences, (2) course completion, (3) journal reading, and (4) attendance at training sessions.

We found our sample to be quite active. Approximately half of the teachers had attended several (between 1 and 5) professional meetings and conferences over the previous 2 years. The average attendance was 6.3 meetings.

Nearly half of the teachers had taken between 1 and 5 courses in the previous 2 years, with a mean of 3.1 courses. Most teachers in the sample (74%) reported that they read between 1 and 3 journals regularly. Finally, asked how many training sessions they had attended in the past 2 years, nearly half the teachers (48%) reported attending 1 to 3 sessions. A significant number (26%) had attended between 4 and 6.

These data indicate that most of the teachers in our sample were actively involved in professional development activities. Over the past two years, our "average" teacher attended 6 professional meetings or conferences and 5 training sessions, read 3 journals regularly and took 3 courses. This is a remarkable amount of investment in professional growth. (Tables 1.1.2-1.1.5)

We need to acknowledge here that, because professional development is socially desirable, these self reports may tend to be somewhat inflated. We accept this as a problem with collecting these kinds of data. But we also believe the level of activity logically could be associated with teachers purposely involved in school improvement activities, particularly when the practices they implement require special training and follow-up maintenance activities. Also, as we mention later, these schools report involvement in school improvement efforts in addition to those that we focused on in the study. These too may have required attendance at workshops, courses, etc. The picture of so much activity is intriguing, given so much recent attention to an aging, frustrated, "burned-out" teacher population.

The concept of teacher efficacy involves the extent to which the teacher believes he or she can influence student learning. We were particularly interested in this variable, since the Rand Corporation's federal change agent studies (Berman & McLaughlin, 1975) concluded that efficacy had an important influence on school improvement. To aid in later cross-study comparisons, we used the same items to assess efficacy as Rand. We asked teachers to report how much they agreed (select one: strongly agree, moderately agree, moderately disagree, strongly disagree) with the following statements:

1. When it comes right down to it, a teacher can't do much because a student's motivation and performance depends on his or her home environment.

2. If I really try hard, I can get through to even the most difficult or unmotivated students.

We scored responses one to four for the first item and four to one on the second item, then summed the scores. Totals ranged from two (low efficacy) to eight (high efficacy). Table 1 reports the distribution of scores derived from the combination of responses. As indicated, teachers ranged in their perceptions of personal efficacy. Most (82%) believed that they did have influence over student learning, that they were neither powerless nor lacking in control over the learning situation. Nearly 18% of the teachers believed their influence to be somewhat lacking. Although this variable has a moderate range in our sample, it was found not to influence the outcomes of school improvement. The degree of teacher efficacy did not correlate significantly with any of our outcome variables. This interesting finding is contradictory to conclusions of the Rand study, which found that the more "efficacious" teachers felt, the greater the extent of program implementation.

Table 1
Extent of Efficacy Reported by Teachers
Data Source: User Questionnaire

| Degree of Efficacy | Number of responses | Percent |
|---|---|---|
| High degree (8) | 54 | 18.8% |
| (6-7) | 181 | 63.1 |
| (4-5) | 51 | 17.8 |
| Low degree (2-3) | 1 | .3 |
| N = | 287 | 100.0% |
| Mean = 6.4 | | |
| S.D. = 0.68 | | |

One possible reason for these different findings is the differences in what the two studies focused on as new practices. As we point out in Volume I and Datta (1981) discusses in her critique of the Rand studies, Rand looked at locally developed "programs" that often lacked shape, definition, and validation. One would suspect that their implementation success would rely heavily upon teacher factors, such as knowledge, skill, and, as they found out, sense of efficacy. Our study examined practices that were more defined. For those developed externally to the adopting site, their key elements had been defined enough to be evaluated and transported. Those developed locally had benefited from several more years of learnings about what practice characteristics led to greater learning outcomes, and these too greater learning outcomes, and these too had a shape that had been described and evaluated. One could logically argue, then, that the less amorphous practices we examined would rely less heavily on teacher factors for success. Thus, it is reasonable that teachers' sense of efficacy did not play as large a part in the understandings that developed from our study as it had done done in Rand's.

## Teacher Attitudes Toward the Practice

Attitudes clearly influence how much a person invests in an activity, and therefore in the activity's success. We suspected that teacher attitude, too, would influence the process and effects of school improvement efforts. We measured teachers' feelings, perspectives, and motivations toward the practices we studied from a number of angles.

Knowing that teachers have endless demands on their energies and attention, we believed that for a practice to be successfully implemented, it needed to be a high priority for the user. As noted in Table 2, when asked how important the practice was to them, over 90% of the teachers in the sample said it was "important" or "very important."

Table 2
Priority for Use of the Practice
Data Source: User Questionnaire

| | Number of responses | Percent |
|---|---|---|
| Very important (1) | 150 | 54.3% |
| Important (2) | 104 | 37.7 |
| Not very important (3) | 17 | 6.2 |
| Not important at all (4) | 5 | 1.8 |
| N = | 276 | 100.0% |

Mean = 1.6
S.D. = 0.73

Perhaps this high priority for use was a result of the teachers' sense of ownership of the practices. To assess their ownership, we asked teachers to respond to several items (see Table 1.2.7 for item responses):

1. Working with this new practice
   - solves problems I have been grappling with.
   - does not really address the problems I have encountered in schools.

2. Working with this new practice
   - is something I am proud of.
   - is part of my job.

3. The attempt to carry out this new practice
   - could have been successful without my special contribution.
   - could not have been successful without my special contribution.

4. Working with this new practice was something I
   - wanted to do.
   - felt I had to do.

We next scored low ownership responses as zero and high responses as one, then summed the four items. Table 3 shows distributions on this zero to four scale. Note that, overall, teachers gave very strong positive responses. In fact, 80% of the sample scored a three or four.[6]

Table 3
Teachers' Sense of Ownership in the Practice
Data Source: User Questionnaire

| | Number of responses | Percent |
|---|---|---|
| High degree of ownership (4) | 75 | 31.5% |
| (3) | 114 | 47.9 |
| (2) | 28 | 11.8 |
| (1) | 14 | 5.9 |
| Low degree of ownership (0) | 7 | 2.9 |
| N = | 238 | 100.0% |

Mean = 3.0
S.D. = 0.97

Several recent research studies (Bentzen, 1974; Berman & McLaughlin, 1975) have indicated that successful implementation depends upon teacher involvement in planning and decision-making related to the improvement effort. To find out about teachers' sense of control over implementation, we gave teachers three forced-choice items (which of the two statements, we asked, best characterizes their practice implementation?):

1. Teachers participated in the decision to adopt this practice, or

   Administrators decided to adopt this practice.

---

[6] In our causal models, discussed in Volume III, the two variables "priority for use" and "sense of ownership" were combined to create a variable called "teacher commitment."

2. The implementation was totally pre-planned, or

   The implementation was a combination of pre-planning and continuous problem-solving.

3. Teachers were involved in solving problems related to the use of the practice, or

   Administrators solved most of the problems related to the use of the practice.

We then scored low influence responses as zero and high as one, and summed responses to the three items. Table 4 shows distributions on this zero to three scale.

Table 4
Teachers' Extent of Control Over Use of the Practice
Data Source: User Questionnaire

| | | Number of responses | Percent |
|---|---|---|---|
| High influence | (3) | 45 | 16.1% |
| | (2) | 141 | 50.5 |
| | (1) | 74 | 26.5 |
| Low influence | (0) | 19 | 6.8% |
| N = | | 279 | 99.9% |
| Mean = 1.8 | | | |
| S.D. = 0.93 | | | |

Approximately two-thirds of the teachers indicated that they were involved in decisions about implementing the practice. The other third reported little if any influence over project decisions. It is perhaps interesting to note here what our field study data can add to this finding (Huberman & Miles, 1982). There, we found that teachers played only a minor role in the initial adoption decision in ten of the twelve sites, and over 60% of them mentioned "administrative pressure" as a factor in their beginning to use the practice. In a few sites, that pressure continued into early and later implementation; in others, administrators gave more "latitude" to adapt the innovation to meet implementation difficulties teachers encountered.

The survey and field study findings that a more-than-minor number of teachers had low influence over implementation is particularly interesting, given that nearly all of the teachers gave the new practice high priority and felt a strong sense of ownership. Since most of our teachers had several years' experience with the practices, it is possible that the strongly positive feelings resulted from continued successful use, rather than from personal involvement from the beginning. The field study gives clear support to this idea. Rather than commitment resulting from involvement at the beginning, the stretching experience of a demanding innovation led to increased effort and (with assistance) the learning of new skills and successful use. These in turn generated teacher commitment and ownership on an after-the-fact basis.

Finally, we assessed how congruent the new practices were with the teachers' values or teaching philosophies. We found that the practices we studied were largely "in sync" with the values of the teachers in the sample. In nearly one-quarter of the cases (23%), however, there was something that did not fit. Again, given the high positive responses to the importance of the practice, it is possible that those who found conflicts with their values also found enough agreement -- or perhaps the successes they experienced compensated for the differences -- and allowed the teachers to both continue use and acknowledge the importance of the practice (Table 1.1.6).

## Teacher Understandings of the Practice

Previous research (Fullan, 1982) has indicated that teachers' knowledge about a practice influences not only their use of it, but its ultimate impact as well.

We asked teachers for information about two characteristics of the practice: its purpose, and requirements for its implementation. In response to a multiple-choice item where they were asked to choose two purposes for the practice, teachers most often chose: (1) fostering positive student attitudes toward learning, (2) increasing student achievement, and (3) promoting student personal development. Note that these responses are directly related to student outcomes; teachers rarely indicated more teacher-oriented purposes, such as developing staff skills and improving management procedures (Table 1.1.7).

Asking teachers about how many of the requirements for implementation were in place before the practice was actually put into use allowed us a measure of "readiness" (which is the label used for this variable in the causal models). Various implementation requirements were probed including motivation, skills, materials, and funds. Because degree of readiness was found to be correlated with school improvement outcomes (see Volume III), we report responses in detail in Table 5.

Table 5
Teachers' Perceptions of Readiness
for Practice before Implementation
Data Source: User Questionnaire

| ITEM | Not in place at all | Only partly in place | Fully in place |
|---|---|---|---|
| The motivation to achieve the purpose of the practice | 12.6% | 48.1% | 39.3% |
| The motivation to adopt the practice | 13.0% | 42.0% | 45.0% |
| The resources (equipment, teacher aides, time, etc.) to adopt the practice | 25.6% | 49.6% | 24.8% |
| The skills to adopt the new practice | 14.5% | 49.8% | 35.7% |
| An understanding of the new practice | 24.3% | 51.3% | 24.3% |
| Materials developed specifically for the new practice | 37.6% | 46.8% | 15.6% |
| Money needed to adopt the new practice | 30.6% | 31.8% | 37.6% |

N = 296 users

This table tells us some interesting things about teachers' perception of readiness before implementation. First, we can see a wide range in the sample. There is no one readiness indicator on which the full sample was either not prepared, partially prepared, or fully prepared. We find many reporting that motivation was present early, fewer reporting that they had some or all of the skills they needed, and still fewer with materials and resources in place. In the large majority of cases, every implementation requirement was at least partially in place, so few sites were starting at "ground zero." This becomes an important factor as we try to understand what leads to successful implementation, since different sites would obviously need different kinds of help and support because they were beginning at different places in the implementation process. As this volume unfolds, and as we discuss this issue in greater depth in Volume III, we find that the amount of change required for a given teacher and a given site influences their potential for success.

## Teacher Behaviors Related to the Practice

One of the more important questions for the study to answer was, "What did teachers actually do with the new practices?" Previous studies (Berman & McLaughlin, 1975) have indicated a disappointingly low rate of use of programs developed with federal support. Since we consider extent of implementation an outcome of school improvement efforts, we wait until Chapter IV, Outcomes, to discuss this question. (We might note, however, in anticipation of a longer discussion later, that our teachers' extent of implementation was remarkably high, especially given the findings of earlier research.) Here we briefly describe three kinds of behaviors that contribute to, and surround, school use of the practice:

- How did teachers solve problems occurring in their use of the practice?
- How did teachers evaluate their use of the practice?
- What different kinds of implementation activities were teachers engaged in, and how much time did they invest in each?

When asked what problems they had encountered with the practice, half of the teachers discussed one or more problems. These included time and management issues, often the case when new materials and behaviors are being tried out. Those who mentioned these problems reported a variety of ways in which they were solved. Most prevalent was adaptation of the practice itself or management of the practice, mentioned by 47% of those who noted problems. This would seem to confirm findings of the Rand study of school improvement, which reports a significant amount of adjustment made in innovations in order for them to better "fit the situation" (Berman & McLaughlin, 1975).

Here again, our field study can add richness to our understandings from survey data. There, where moderate to substantial changes were made in the practice in nine of the twelve sites, we found that these were made to solve problems of 1) poor "fit" of the practice in the organizational setting, 2) too much demand put on teachers by the practice, 3) poor preparation to use the practice easily, and 4) lack of time.

Some teachers in the sample solved problems by using other people -- directly soliciting their help, increasing communication with them, or coordinating activities with them. Staffing solutions, either adding staff or upgrading skills, also were used (Tables 1.1.8 and 1.1.9).

Our assessment of teachers' evaluation behaviors revealed that the most common form of evaluation was an informal, casual analysis of "how things are going," done by the teacher alone. It is not surprising that testing students also was a common strategy, since many of the practices used by the teachers had special tests to assess and monitor student progress. A few other formal strategies were used for evaluation: these included surveying staff and parents, using assessment teams, and employing an external evaluator. On the whole, however, it appears that teachers more often evaluate informally, discussing, observing, and noting problems and progress. The large range of reported evaluation activities is somewhat surprising, given teachers' alleged lack of training in evaluation, aversion to it, and the demands made on time for instruction (Tables 1.1.10 and 1.1.11).

One of the notions we had as we developed our original model of school improvement at the school level, was that the time and effort invested in implementation by teachers was a critical factor in explaining outcomes. We believed that the time spent by teachers was the result of selected teacher characteristics, and it in turn influenced implementation, and finally outcomes impacting on students, teachers, and the organization. In a sense, we viewed teacher time on implementation tasks as a "mediating" factor, and an important one to explore.

We did find, in fact, that teacher time spent in practice-related activities had important effects on outcomes. Therefore, we provide a detailed discussion here of measurement and distribution of findings in our teacher sample. Fifteen items from the User Questionnaire measured the type and comparative amount of time teachers spent implementing the new practice. When teacher responses to the 15 items were factor-analyzed, they produced five variables:

- classroom time -- the amount of time the teacher reported spending in analyzing the needs of the class, planning classroom use of the practice, reorganizing the class, and using the practice in the classroom (four items).
- materials time -- the amount of time the teacher reported developing, locating, and studying materials (three items).
- training time -- the amount of time the teacher reported gathering information about the practice, observing others using it, receiving training, and getting help from outside the district (four items).
- evaluation time -- the amount of time the teacher reported handling paperwork, evaluating use of the practice, and discussing the practice with peers (two items).
- communication time -- the amount of time the teacher reported explaining the practice to others and training others in its use (two items).

Teachers had been asked to indicate how much time they spent over the life of the project in each of the 15 activities. Response choices were "no time," "a little time," and "a lot of time," and were coded zero, one, and two, respectively. A sum of the responses for each activity in a variable gave the total score on that variable.

In the remainder of this section, we present and discuss the distribution of responses for each of the five teacher time variables.

Classroom Time. The amount of classroom time is reported in Table 6. Scores ranged from zero to eight, with eight indicating the teacher reported spending a lot of time on every activity.

Table 6
Distribution of Time Spent in
Practice-Related Classroom Activity
Data Source: User Questionnaire

| Amount of Time | Number of responses | Percent |
|---|---|---|
| 0 (no time) | 9 | 3.4% |
| 1-2 (a little time) | 17 | 6.4 |
| 3-4 | 44 | 16.6 |
| 5-6 | 64 | 24.2 |
| 7-8 (a lot of time) | 131 | 49.4 |
| N = | 265 | 100.0% |
| Mean = 5.8 | | |
| S.D. = 2.11 | | |

Responses on this variable were skewed toward the high end of the scale. This describes a major investment of time reported by our sample in classroom use of the practices.

Material Time. Time spent on materials is reported in Table 7. Scores ranged from zero to six, with six reflecting teachers spending a lot of time on every activity.

Table 7
Distribution of Time Spent
on Practice-Related Materials
Data Source: User Questionnaire

| Amount of Time | Number of responses | Percent |
|---|---|---|
| 0 (no time) | 13 | 4.9% |
| 1-2 (a little time) | 45 | 17.0 |
| 3-4 | 104 | 39.2 |
| 5-6 (a lot of time) | 103 | 38.9 |
| N = | 265 | 100.0% |
| Mean = 3.8 | | |
| S.D. = 1.74 | | |

Time spent on materials is somewhat more normally distributed than classroom time; this may be because many of the practices studied had their own materials and/or teachers already had adequate materials for classroom use. Note, however, that these results are also skewed towards the higher end of the scale, meaning that teachers still had to put some time into materials.

Training Time. Similar to classroom time, the time spent in training (see Table 8) is reported on a scale of zero to eight.

Table 8
Distribution of Time Spent
In Practice-Related Training
Data Source: User Questionnaire

| Amount of Time | Number of responses | Percent |
|---|---|---|
| 0 (no time) | 10 | 3.8% |
| 1-2 (a little time) | 49 | 18.5 |
| 3-4 | 139 | 52.5 |
| 5-6 | 53 | 20.0 |
| 7-8 (a lot of time) | 14 | 5.3 |
| N = | 296 | 100.0% |
| Mean = 3.6 | | |
| S.D. = 1.69 | | |

This variable is distributed fairly normally. Most teachers report spending some time in training-type activities, but relatively less time than they spent either in classroom use or working with materials. This is probably due to the "one-shot" workshops that typically accompany the practices examined in this study. These workshops may in fact have taken several days, but looking back over the life of the implementation, teachers report that this time, compared to that spent in other activities, was minor.

Evaluation Time. Time spent in evaluation activities is reported on Table 9. Scores ranged from zero to four, with four being a lot of time spent on all activities probed.

Table 9
Distribution of Time Spent
on Practice-Related Evaluation
Data Source: User Questionnaire

| Amount of Time | Number of responses | Percent |
|---|---|---|
| 0 (no time) | 11 | 4.2% |
| 1 (a little time) | 33 | 12.5 |
| 2 | 71 | 26.8 |
| 3 | 74 | 27.9 |
| 4 (a lot of time) | 76 | 28.7 |
| N = | 265 | 100.0% |

Mean = 2.6
S.D. = 1.14

This variable appears to have a somewhat even distribution, although few teachers report spending little time in evaluation activities. The moderate to high amounts of time spent may be due to the built-in testing procedures in most of the practices.

Communication Time. Like evaluation time, time spent in communication activities is reported on a scale of zero to four.

Table 10
Distribution of Time Spent on
Practice-Related Communication
Data Source: User Questionnaire

| Amount of Time | Number of responses | Percent |
|---|---|---|
| 0 (no time) | 44 | 16.6% |
| 1 (a little time) | 95 | 35.8 |
| 2 | 69 | 26.0 |
| 3 | 39 | 14.7 |
| 4 (a lot of time) | 18 | 6.8 |
| N = | 265 | 100.0% |

Mean = 1.6
S.D. = 1.13

Respondents did not spend a lot of time reaching out to others: 52% responded with a zero or one. This may be due to the types of activities included in this category -- clearly going beyond the everyday use of a new practice by a teacher. Reaching out to others requires more than a commitment by a teacher; it needs a willingness on the part of administration to free up his or her time. This apparently did not happen often with our teachers. Their time was largely spent in classroom use, with some investment in materials, training, and evaluation activities.

## Summary

This section has given us a look at the teachers in our sample: their professional characteristics, their attitudes towards the practices they were implementing, and their activities that related to those practices. For the most part, the teachers were experienced and engaged in a wide range of professional development activities (e.g., training, coursework, conferences).

Teachers gave the practices they were implementing high priority and invested a lot of time using them in their classrooms. Sense of ownership and commitment were remarkably high. A sizeable number of teachers (nearly one-third) reported no involvement in implementation decisions. This set of findings challenges conclusions from earlier research, which emphasizes the need to involve teachers early and often in implementation decisions. We have two interpretations for why we found what we did. First, our experience tells us that teachers often develop commitment during training if and when the trainer is a credible practitioner who relates use of the new practice to real classroom problems and situations. Teachers "emulate" such a person, and try out practices they may otherwise have rejected (Crandall, 1981). In many cases, the trainers in our sample were just such people. Second, our field study found that commitment often develops after successful experiences with a practice in a classroom (Huberman & Miles, 1982). When teachers see it working for their students, they develop a sense of ownership.

The commitment of our teachers seems to have been expressed through a great deal of time and energy spent in practice-related activities. They spent the most time in classroom use, and the least amount of time in training and communication with others (including dissemination). They evaluated the practices both formally (often through practice-provided measurement procedures) and informally (through observing students and discussing the practice with other staff and parents). The problems they had with the practice were largely resolved by adapting their use of the practice to meet the needs of their own situations, working with and getting help from others in many cases.

This gives us a rather full and encouraging picture of the teachers in our sample, whom we consider the primary players in the school improvement efforts we studied.

# Section 2:

## Building and District Level Administrators

Now that we have profiled the teachers who play a key role in school improvement, we turn to players in supporting roles. One such set of players is administrators, both at the school building and the central office levels. In this section we characterize these people in much the same way as we described our teachers, by noting who they were, their professional characteristics, their feelings about the school improvement efforts, and the roles they assumed in supporting these efforts.

### Who are the Administrators?

Building and District Administrators. At each site an effort was made to obtain information from two administrators -- one at the building level and one at the district level. We included the building level person most responsible for insuring the implementation of the practice -- most often the principal, but occasionally an assistant principal. In either case, we refer to the building level administrator as the "principal." In a similar manner, we gathered information from a high level district administrator. In most cases this was the superintendent, and will be referred to as such, although an assistant superintendent may have been the actual source of information. Thus, two "line" administrators were included for each site: the principal and the superintendent.

Occasionally we found that a principal or a superintendent did not know about the practice we were studying, nor could he or she refer us to another building level or district level person who did. In this case, we gathered as much information as possible from the administrator, and labeled him or her as a "non-implementing principal" or "non-implementing superintendent."

We interviewed 139 district level administrators and 144 building level administrators for the 146 sites in our sample. At nine sites we interviewed only one administrator. The distribution of principals and superintendents is given in Table 11 along with that of local facilitators, whom we will discuss in a moment.

Table 11
Distribution of Administrators in the Sample
Data Sources: Administrator Interview and
Local Site External Agent* Interview

| | N | Percent of Sites Represented |
|---|---|---|
| Implementing principals | 110 | 75.3% |
| Non-implementing principals | 34 | 23.3 |
| Total principals | 144 | 98.6 |
| Implementing superintendents | 86 | 58.9 |
| Non-implementing superintendents | 53 | 36.3 |
| Total superintendents | 139 | 95.2 |
| Local facilitators | 78 | 45.2 |
| Total number of sites | 146 | — |

*Although we refer to internal assistance providers as "local facilitators" throughout the text, we give the original titles of the instruments to facilitate locating specific items -- hence the use of the term "local site external agent."

Note that nearly a quarter of the principals, and over a third of the superintendents, had not been involved in the implementation. This is interesting, especially since the sites in our sample were ones where use of the practice was continuing (i.e., the implementation had been a "success"). The stable presence of a building or district administrator may not be an important factor. To further explore this idea, we took a look at how these administrators were distributed at our sites. As noted in Table 12, exactly half of the 146 sites had both implementing principal and superintendent. Nearly 22% had a principal who had been involved in implementation, but an unknowledgeable superintendent. In a few of the sites (9%), the current principal had not been involved, but the superintendent had been.

## Table 12
## Distribution of Implementing and Non-Implementing Administrators by Site

| | | Superintendents | | |
|---|---|---|---|---|
| | | Implementing | Non-Implementing | Total |
| Principals | Implementing | 73<br>(50.0%) | 32<br>(21.9%) | 105 |
| | Non-Implementing | 13<br>(8.9%) | 21<br>(14.4%) | 34 |
| | Total | 86 | 53 | 139* |

*Note that at five sites, principals but not superintendents were interviewed. Therefore, the total number of principals on Table 11 is 5 less than the number of principals in the sample, which was 144.

This more complete picture of administrator distribution reveals that few sites (14%) were currently without either one or both of the administrators who had been involved in the implementation. Some stability existed which may have contributed to the longevity of use of the practice. This is indeed a precursor of findings reported later in this report series: the help, support, and commitment of administrators is important to the success of school improvement efforts, and especially to their continuation and institutionalization.

Tables 13 and 14 give the distributions of implementing and non-implementing administrators by program. It is most interesting to note the low percentages of administrators who had been involved in the implementation (i.e., "implementing") at the sites where BEH materials were being used, and the high percentages where local development had been funded through Title IV-C. The sheer difficulties in finding BEH sites, reported in Volume I, seem to go together with this lack of administrator knowledge about and involvement in use of the materials. At the other extreme, the nature of a Title IV-C development effort may demand a more closely involved and committed administrator, one who "sticks with it" and ensures that the program "sticks," too.

Local Facilitators.[7] An effort was made to interview additional individuals working at the central office level who played a role

---

[7] District personnel who acted as "local facilitators" are described in this section in terms of their administrator roles. In Section 3, we discuss the assistance they gave to local sites and compare it to the help given by external facilitators.

## Table 13
## Distribution of Implementing Administrators by Program

| | All | NDN<br>Non-Title I | NDN<br>Title I | BEH | Title IV-C Local Development | State-Administered |
|---|---|---|---|---|---|---|
| 1. Total number of sites for program | 146 | 48 | 26 | 17 | 24 | 31 |
| 2. Number of sites with implementing principal | 110 | 37 | 20 | 6 | 23 | 24 |
| 3. Number of sites with implementing principal (2) as a proportion of the total number of sites for program (1) | 75.3% | 77.1% | 76.9% | 35.3% | 95.8% | 77.4% |
| 4. Number of sites with implementing superintendent | 86 | 35 | 11 | 2 | 22 | 16 |
| 5. Number of sites with implementing superintendent (4) as a proportion of the total number of sites for program (1) | 58.9% | 72.9% | 42.3% | 11.8% | 91.7% | 51.6% |
| 6. Total number of implementing administrators | 196 | 72 | 31 | 8 | 45 | 40 |

## Table 14
## Distribution of Non-Implementing Administrators by Program

| | | NDN | | | | |
|---|---|---|---|---|---|---|
| | All | Non-Title I | Title I | BEH | Title IV-C Local Development | State-Administered |
| 1. Total number of sites for program | 146 | 48 | 26 | 17 | 24 | 31 |
| 2. Number of sites with non-implementing principal | 34 | 11 | 6 | 9 | 1 | 7 |
| 3. Number of sites with non-implementing principal (2) as a proportion of the total number of sites for program (1) | 23.3% | 22.9% | 23.1% | 52.9% | 4.2% | 22.6% |
| 4. Number of sites with non-implementing superintendent | 53 | 12 | 14 | 13 | 2 | 12 |
| 5. Number of sites with non-implementing superintendent (4) as a proportion of the total number of sites for program (1) | 36.3% | 25.0% | 53.8% | 76.5% | 8.3% | 38.7% |
| 6. Total number of non-implementing administrators | 87 | 23 | 20 | 22 | 3 | 19 |

in the implementation of the practice. Each teacher who was interviewed was asked to identify those in the district who were active in getting the new practice into place. If someone was named other than the building principal or district superintendent, and was outside of the building yet within the district, that person was designated a "local facilitator." These people were usually curriculum coordinators, federal program coordinators, or directors of specific projects.

At 66 of our local sites (45% -- see Table 11) ) at least 1 local facilitator was identified. (Ten of those sites had 2 local facilitators and 1 site had 3.) No one was identified in the remaining sites.

The local facilitators were clearly different from the superintendents and principals, who were selected by virtue of their administrative positions. The nature of this difference is examined in the course of this section. First, we observe that local facilitators were not simply filling in for the non-implementing administrators in insuring the implementation of a new practice at a site. As Table 15 illustrates, local facilitators were identified more often at sites which had superintendents and principals who were active in the implementation process, than at sites which had non-implementing superintendents and principals.

Table 16 shows the distribution of local facilitators by program. What is interesting is the wide range of percent of sites with such people. Title I NDN sites often had Title I coordinators or federal program coordinators who played this role. Title IV-C local development sites also had project directors at the district levels. These two programs had the only "formal" local facilitators. In NDN (non-Title I) sites, there still were a large number of local facilitators, while in sites using state-administered practices, these were relatively few. Perhaps the fact that developers who worked with state programs were more accessible to local sites than those whose projects were NDN-funded, made state-supported sites less likely to need local assistance and coordination. This is discussed further in Section 3. Again, BEH sites had few local facilitators; perhaps this was because of the nature of the practices, which were usually materials rather than whole programs.

## Data Collection

At each local site, building and district level administrators were interviewed (Administrator Interview) and completed a questionnaire (Administrator Questionnaire). Non-implementing administrators were given a shorter version of the Administrator Interview and a separate questionnaire (Non-Implementation Version of Administrator Questionnaire) that omitted specific references to the practice in question. The local facilitators were given a shorter form of the External Agent Questionnaire (Local Site External Agent Questionnaire) and a site specific interview (Local Site External Agent Interview).

### Table 15
### Number of Sites with Local Facilitators and Number of Local Facilitators for a Given Type of Administrator

| Types of Administrator at Sites with Local Facilitators | Number of Sites with Local Facilitators | Number of Local Facilitators |
|---|---|---|
| 1. Superintendent and principal | 58.5%<br>(38) | 59.0%<br>(46) |
| 2. Superintendent and non-implementing principal | 7.7%<br>(5) | 7.7%<br>(6) |
| 3. Principal and non-implementing superintendent | 23.7%<br>(15) | 20.5%<br>(16) |
| 4. Non-implementing superintendent and non-implementing principal | 9.2%<br>(6) | 10.3%<br>(8) |
| 5. One implementing administrator (either Principal or Superintendent) | 1.5%<br>(1) | 2.6%<br>(2) |
| 6. No administrator | 0 | 0 |
| Totals | 100.6%<br>(65) | 100.1%<br>(78) |

## Table 16
## Distribution of Local Facilitators by Program

| | All | NDN<br>Non-Title I | NDN<br>Title I | BEH | Title IV-C Local Development | State-Administered |
|---|---|---|---|---|---|---|
| 1. Total number of sites for program | 146 | 48 | 26 | 17 | 24 | 31 |
| 2. Number of local facilitators | 78 | 27 | 19 | 2 | 24 | 6 |
| 3. Number of sites with local facilitators | 66 | 23 | 16 | 2 | 20 | 5 |
| 4. Average number of local facilitators per site: (2) divided by (3) | 1.2 | 1.2 | 1.2 | 1.0 | 1.2 | 1.2 |
| 5. Number of sites with local facilitators (3) as proportion of the total number of sites for program (1) | 5.2 | 47.9% | 61.5% | 11.8% | 83.3% | 16.1% |

The data gathered from these instruments included information about the activities, attitudes, and knowledge of the administrators. Summaries of this information comprise the remainder of this section. As in the previous section, detailed information about the questions asked and the responses received is provided in the Appendix; items playing an important part in causal modeling analyses are reported in the text.

### Administrator Characteristics[8]

We characterize the different types of administrators in our sample by the *amount and kind of experience* they have had, and by their different *professional activities*. Our sample appears to be quite experienced in school administration, with principals averaging 10 years, superintendents 16 years, and local facilitators 5 years. In addition, local facilitators had spent an average of 11 years as classroom teachers (Tables 1.2.1-1.2.3).

The administrators in our sample also were quite active professionally.[9] For example, in the 2 years prior to the study, principals said they had attended an average of 12 professional meetings or conferences; superintendents, 17; and local facilitators, 25. The number of job-related courses they reported taking ranged from an average of 1 for superintendents to 3 for local facilitators. Likewise, principals reported that they regularly read an average of 3 professional journals; local facilitators read 4, and superintendents read 5. Local facilitators attended 9 training events (Table 1.2.4).

Again, we should note that these self-report data are suspect, since large amounts of professional activity are socially desirable for administrators. Even considering a certain amount of inflation, the administrators report a *very* active work life. Local facilitators, whom we found to play important roles in keeping teachers up-to-date in skills and information, were the most active administrators, attending considerably more meetings, courses, and training events than the line administrators.

---

[8] We use the word "administrator" in this section to include all three: principal, superintendent, and local facilitators.

[9] Note that, as reported in Table 1.2.4, implementing and non-implementing administrators showed no significant differences in their amount of professional activity. This gives us some confidence that their involvement in implementation (or lack thereof) does not signal that they represent two distinctly different populations.

## Administrator Attitudes Toward the Practice

Attitudes are critically important in any change effort, particularly for those whose support is necessary to make it successful. As with the teachers in our sample, we were concerned about the administrators' feelings, perspectives, and motivations toward the new practices.

What motivated the administrators[10] to decide to adopt the practices? A large majority of each type of administrator -- as high as 87% of the local facilitators -- reported that they were motivated by concerns about the educational environment. Few reported that other concerns -- legal, political, or economic -- were their primary motivation (Table 1.2.5).

As with teachers, we found that administrators were sold on the value of the practice. More than 85% of both administrators and local facilitators stated firmly that the advantages of the practice outweighed the disadvantages (Table 1.2.6).

Administrators reported a high degree of commitment to the practices. When asked about their pride in the practice, their contribution to its success, their motivation to use it, and whether it met their perceived needs, our administrators responded even more positively than teachers. On a scale of 0 to 4, nearly 85% scored a 3 or 4. We suspect that one reason for these more favorable responses was that administrators don't experience the day-to-day realities of working with new practices. Although teachers showed a great deal of commitment, theirs may have been slightly less than that of administrators because they experienced the problems and demands at much closer range (Table 1.2.7).

## Administrator Understandings of the Practice

To give us some information about administrators' understandings of the new practices, we asked about two practice characteristics: the purpose, and the requirements for its implementation. As to the purpose of the practices, administrators, like teachers, were asked to choose two statements that most clearly represented the practice's purpose. They identified three most often from the list of choices provided: (1) fostering positive student attitudes toward learning, (2) increasing student achievement, and (3) promoting student personal development. These were exactly the same purposes chosen by teachers. Less than 10% of the administrator sample included developing staff skills, reducing drop-out rates, and other less immediate outcomes as the primary purpose (Table 1.2.8).

---

[10] Note here that only "implementing" administrators were asked questions about the practice, since "non-implementing" administrators by definition did not know enough to respond.

Readiness, as assessed by the presence or absence of certain requirements for implementation prior to use, was found to have an important influence on school improvement outcomes. Therefore, we provide a detailed description of responses to the series of items in Table 17. In that table we compare different types of respondents. It appears that, in the aggregate, principals, superintendents, local facilitators, and teachers show remarkable agreement about what elements were and were not in place before adoption. For all respondent groups, the elements which were more frequently reported as being "fully in place" are the motivation to adopt the practice (Item b), and the motivation to achieve the purpose of the practice (Item a). The element most frequently missing before adoption is the materials developed specifically for the new practice (Item f). The money needed to adopt the new practice (Item g) was fully in place for about a third of the respondents (from 22% to 38%), and not at all in place for somewhat more than a third of the respondents (from 31% to 46%). It is an interesting question whether the unequal distribution of the initial availability of the money needed to adopt a new practice has an effect on the success of the adoption. As it turns out, money was not an important factor in success; however, the overall degree of readiness did have some influence on how change at the school level took place (discussed at length in Volume III).

## Administrator Roles in School Improvement

Administrators of all kinds can play different roles in school improvement efforts. Or they can play no particular role. We wanted to know, from the perspectives of both the administrators and the teachers, what role(s) administrators played in two areas: in school improvement efforts in general, and in the implementation of the specific practice we were focusing on.

When we asked the implementing "line" administrators -- principals and superintendents -- to describe their general role(s) in encouraging school improvement, they listed several. Among the most important roles were: coordinating internal communication (listed by nearly half), identifying the need for improvement, encouraging use, and actual assistance in implementation. This list appears to characterize a remarkably active, involved group of administrators when it comes to school improvement (Table 1.2.9).

Table 17
Readiness: The Extent to Which Items Were in Place in the School Before Implementation
as Reported by Administrators, Local Facilitators, and Teachers
Data Sources: Administrator Questionnaire, Local Site External Agent Questionnaire,
and User Questionnaire

| | Type of Respondent | | | |
|---|---|---|---|---|
| | Implementing Administrator | | | |
| Items | Principal | Superintendent | Local Facilitator | Teacher |
| a. The motivation to achieve the purpose of the practice | | | | |
| Number of respondents | 99 | 69 | 75 | 270 |
| % responding not all in place | 7.1% | 7.2% | 8.0% | 12.6% |
| % responding only partly in place | 52.5% | 63.8% | 60.0% | 48.1% |
| % responding fully in place | 40.4% | 29.0% | 32.0% | 39.3% |
| b. The motivation to adopt the practice | | | | |
| Number of respondents | 100 | 70 | 75 | 269 |
| % responding not at all in place | 5.0% | 11.4% | 16.0% | 13.0% |
| % responding only partly in place | 53.0% | 57.1% | 56.6% | 42.0% |
| % responding fully in place | 42.0% | 31.4% | 28.0% | 45.0% |
| c. The resources (equipment, teacher aides, time, etc.) to adopt the practice. | | | | |
| Number of respondents | 98 | 69 | 76 | 270 |
| % responding not at all in place | 26.5% | 26.1% | 26.3% | 25.6% |
| % responding only partly in place | 43.9% | 53.6% | 56.5% | 49.6% |
| % responding fully in place | 29.6% | 20.3% | 17.1% | 24.8% |
| d. The skills to adopt the new practice | | | | |
| Number of respondents | 99 | 68 | 74 | 269 |
| % responding not at all in place | 10.1% | 14.7% | 12.2% | 14.5% |
| % responding only partly in place | 63.6% | 70.6% | 67.6% | 49.8% |
| % responding fully in place | 26.3% | 14.7% | 20.3% | 35.7% |
| e. An understanding of the new practice | | | | |
| Number of respondents | 99 | 69 | 75 | 267 |
| % responding not at all in place | 17.2% | 17.4% | 33.3% | 24.3% |
| % responding only partly in place | 61.6% | 72.5% | 52.0% | 51.3% |
| % responding fully in place | 21.2% | 10.1% | 14.7% | 24.3% |
| f. Materials developed specifically for the new practice | | | | |
| Number of respondents | 96 | 68 | 74 | 263 |
| % responding not at all in place | 41.7% | 42.6% | 37.8% | 37.5% |
| % responding only partly in place | 49.0% | 47.1% | 50.0% | 46.8% |
| % responding fully in place | 9.4% | 10.3% | 12.2% | 15.6% |
| g. Money need to adopt the new practice | | | | |
| Number of respondents | 96 | 68 | 74 | 245 |
| % of responding not at all in place | 36.5% | 38.2% | 45.9% | 30.6% |
| % responding only partly in place | 31.3% | 39.7% | 31.1% | 31.9% |
| % responding fully in place | 32.3% | 22.1% | 22.9% | 37.6% |

Aside from the role they generally played in encouraging school improvement, we wanted to know what administrators in our sample had done to assist in the implementation of the practice[11] we were focusing on. Here our respondents were implementing principals, superintendents, and local facilitators. Table 18 describes the forms of assistance provided on a day-to-day basis as reported by these role groups. Table 19 reports the long-term strategies of these groups. The tables, derived from content analysis of interview questions, give the percentage of implementing administrators who mentioned each item. (Percentages do not add up to 100% because some administrators listed several items.)

Note that, in Table 18, communications was a major role of all groups. After this, principals reported spending more energy in resource provision and management (planning, scheduling, and organizing); superintendents provided general support; and local facilitators were most heavily involved in resource provision. Of special interest is the relatively low frequency with which principals mentioned observing teachers or auditing the program. This indicates a significant amount of autonomy for teachers to use the practice as they saw fit. On the other hand, local facilitators report spending relatively more time observing the program. They, in fact, may be the "instructional leaders" who stay close to teachers as they use the practice.

Table 19 displays the kinds of long-term strategies used by principals and superintendents in supporting use of the new practices. Note a much smaller range of strategies employed by superintendents. This may be because they assume limited responsibility for the long-range support of specific practices; principals, on the other hand, listed many strategies. Most often employed were program expansion, maintenance, protection, and monitoring. It is interesting to note the low numbers of principals who mentioned that they encouraged problem-solving and delegated responsibility. It is clear that principals in the sample saw more direct roles for themselves in supporting the practice, rather than creating an environment where teachers are the primary or only participants. Later in this report series we note that direct assistance from principals works towards different school improvement outcomes than does such stage-setting or indirect support.

---

[11] For the causal models discussed in Volume III, one variable was created that combined the assistance principals reported they gave both on a day-to-day basis and as part of their long-term strategies. This variable, called "principal help given" combines information from Tables 18 and 19.

## Table 18
## Forms of Assistance on a Day-to-Day Basis Provided by Administrators and Local Facilitators
## Data Sources: Administrator Interview and Local Site External Agent Interview Content Analysis

| | Type of Respondent | | |
|---|---|---|---|
| | Implementing Administrator | | |
| Forms of Assistance | Principal | Superintendent | Local Facilitators |
| Communicate with staff | 54.7% | 45.8% | 38.7% |
| Plan, schedule, organize | 46.3 | 31.3 | 15.0 |
| Provide resources | 41.7 | 25.3 | 28.8 |
| Leverage staff | 38.0 | 15.7 | 5.0 |
| Provide support | 38.0 | 48.2 | 12.5 |
| Attend training sessions and meetings | 30.6 | 14.5 | 2.5 |
| Observe the program | 29.6 | 19.3 | 16.2 |
| Handle paperwork | 24.1 | 15.7 | 11.2 |
| Arrange training | 24.0 | 18.1 | 8.8 |
| Communicate with the external facilitator | 23.1 | 27.7 | 12.5 |
| Audit program | 19.4 | 18.1 | 10.0 |
| Make the recommendations to the school board | 7.4 | 26.5 | 0.0 |
| Select staff | 0.0 | 9.6 | 0.0 |
| Other | 14.8 | 7.2 | 1.2 |
| Number of Respondents | 108 | 83 | 80 |

### Table 19
### Administrators' Long-Term Strategies for Assistance
Data Source: Administrator Interview
Content Analysis

| | Implementing Administrators | |
|---|---|---|
| Strategies | Principals | Superintendents |
| Expand the program | 29.7% | |
| Protect and maintain the program | 25.9 | |
| Provide an ongoing review and assessment | 22.2 | 25.3% |
| Assist, train and direct the staff | 13.9 | |
| Encourage new approaches | 13.0 | 13.3 |
| Encourage internal communication | 9.3 | 14.5 |
| Encourage external communication | 8.3 | 8.0 |
| Provide support | 6.5 | 14.5 |
| Be a resource person | 5.6 | 7.2 |
| Encourage problem-solving by others | 3.7 | |
| Keep hands off (benign neglect) | 2.8 | |
| Delegate responsibility | 1.9 | 1.2 |
| Other | 5.6 | |
| Number of Respondents | 108 | 83 |

It is interesting to compare the activities mentioned by the principals in Tables 18 and 19 with the teachers' report of the forms of assistance provided by the principals.[12] Table 20 summarizes these data. It seems the principals are more likely to mention specific forms of assistance that they provide than are the teachers. The teachers lump most activity under "provide support", and they under-represent the planning, scheduling, and organizing that the principals perceive as a major role. Most interesting are activities which principals report they spend a lot of time on, yet are invisible to teachers, such as maintaining external communication and providing for training. It is puzzling that other activities where principals would clearly be visible, such as observing in classrooms and attending training, show such a wide discrepancy in the number of times they are mentioned. It is hard to know from this kind of item, where open-ended questions yield a wide range of responses, exactly what causes the differences. It is clear, however, that principals' and teachers' quick responses to questions about assistance are quite different.

## Principals' Roles as School Leaders

To further understand the contributions of the building principals to school improvement, we decided to measure some characteristics of the principals' style. Two factors emerged from items on the Building Work Climate Questionnaire[13], completed by all the staff in each of our schools. One factor provided a sense of the strength of principal leadership; the other allowed us to characterize his or her management style when working with teachers.

---

[12] This report by teachers of principal assistance -- called "principal help received" -- is another variable used in the causal models.

[13] This questionnaire was completed by every member of the school faculty. Most of the responses are reported in Chapter II. On every item, individual respondent scores were averaged to provide site scores.

### Table 20
### Forms of Assistance Provided by Principals as Reported by Teachers, Compared to Principals' Reports of Assistance
Data Sources: User Interview and Administrator Interview Content Analysis

| | Type of Respondent | | |
|---|---|---|---|
| Forms of Assistance | Teacher | Principals* | Principals** |
| Provide support | 47.1% | 38.0% | 6.5% |
| Provide resources | 25.8 | 41.7 | |
| Leverage staff | 14.0 | 38.0 | |
| Plan, schedule and organize | 11.1 | 46.3 | |
| Identify and solve problems and give advice | 10.8 | | |
| Provide and arrange training | 10.2 | 24.0 | |
| Keep hands off (benign neglect) | 9.6 | | 2.8 |
| Maintain internal communication | 9.6 | | 9.3 |
| Observe program in classroom | 6.4 | 29.6 | |
| Attend training meetings | 5.4 | 30.6 | |
| Maintain external communication | 4.1 | 23.1 | 8.3 |
| Provide staff | 3.8 | | |
| Other | 1.3 | | |
| Number of Respondents | 314 | 108 | 108 |

*Day-to-day assistance as reported in Table 18.
**Long-term assistance as reported in Table 19.

Principal Leadership. Staff members were asked the extent to which they agreed with the following statements[14]:

1. The principal sets priorities, makes plans, and sees that they are carried out.

2. The principal lets staff members know what is expected of them.

This provided an estimate of the strength of the principal's leadership. Scores ranged from 1 to 4, with 4 indicating the strongest leadership. The distributions are shown in Table 21.

Table 21
Percentage Distribution of Principals' Degree of Leadership
Data Source: Building Work Climate Questionnaire

| Degree of Leadership | | Number of responses | Percent |
|---|---|---|---|
| Weak | (1) | 0 | 0.0% |
| | (2) | 25 | 18.1 |
| | (3) | 105 | 76.1 |
| Strong | (4) | 8 | 5.8 |
| N =<br>Mean = 2.9 | | 138 sites | 100.0% |

More than 76% of the school staffs perceived that their principal provided moderately strong leadership, while fewer than 20% felt their principal failed to provide leadership. It also should be noted how few staff (6%) rated their principal as an especially strong leader.

Although the range in strength of leadership does not appear to be wide, this variable turned out to be quite important in understanding change at the school level. The stronger the principal, the more organizational changes were made as a result of implementing the new practice. This finding is discussed in depth in Volume III.

---

[14] Items for this scale were taken from questionnaires developed by the /I/D/E/A/ Study (see Bentzen, 1974).

## Principal Management Style

We also asked teachers to reflect on their principal's management style by reporting the extent to which these items characterized their principal:

1. Solicits my opinion concerning issues affecting me.
2. Rewards initiative.
3. Provides constructive feedback.

Table 22 provides the distribution of this variable, which gives us a sense of how much the principal interacted with and/or responded to the staff.

Table 22
Percentage Distribution of Principal's
Interactiveness in Management Style
Data Source: Building Work Climate Questionnaire

| Degrees of Interactiveness | | Number of responses | Percent |
|---|---|---|---|
| Rarely if ever interactive | (1) | 1 | .7% |
| | (2) | 9 | 6.5 |
| Moderately interactive | (3) | 43 | 31.2 |
| | (4) | 67 | 48.6 |
| Highly interactive | (5) | 18 | 13.0 |
| N = | | 138 sites | 100.0% |

Mean = 3.7

The data indicate a moderately high degree of interaction between principals and teachers. It appears that principals in our sample engaged with teachers to determine their needs and listen to their ideas, and in return were proactive in giving them feedback and rewarding initiative.

## Summary

The picture of administrators which we have drawn here depicts active engagement in school improvement issues and practices. Fully 90% of our sites had administrators who were or had been involved in active support of the practices we were focusing on. Although 24% of the administrators in our sample did not know enough about those practices to talk about them, these people too were involved in many professional growth experiences and encouraged school improvement in general by engaging in a long list of activities.

Principals, district administrators, and local facilitators all made their own contributions to implementation of the new practices. Principals played major communication roles, both with and among school staff, and with others in the district and in the community. They also coordinated use of the practices at the building level, organized resources, rearranged schedules, and engaged and managed personnel. District level administrators, such as superintendents, also played communication roles between schools and with the community. The support they provided was more general, ensuring that resources were available and that the commitment of the central office to the practice was clear.

The local facilitator, a role which previous research has all but ignored, emerged as an important player in nearly half of the sites. This person, usually a project director, curriculum coordinator, or federal program coordinator, was often the direct link between the practice and the teachers, arranging training, providing resources, and spending time in classrooms.

Another aspect of the principal's role emerged as an interesting characteristic of the sample: that of school leader. Aside from any particular involvement with the practices we were examining, our principals were moderately strong leaders, interacting with teachers to exchange ideas. We get a picture of schools where there is two-way communication between staff and administration -- with clear expectations, plans developed with teacher input, follow-through, and feedback. Although our sample's responses did not reflect highly structured, lockstep procedures and processes, we also do not get a picture of a "loosely-coupled" arrangement, where what one person does never affects another, and where decisions never make it past the classroom door. Our administrators are active players in supporting the new practices and in attending to the business of running their schools and districts.

# Section 3:

## External and Local Facilitators[15]

Because our study focused primarily on dissemination strategies, we expected that external assistance (i.e., that provided by individuals outside individual school buildings) could play a large role in school improvement efforts. In this section we describe the individuals who provided that assistance.

### Who are the External and Local Facilitators?

In our study, we gave a great deal of attention to the individuals who helped schools to improve practice: the external and local facilitators. Our selection criteria were based on the definition of an assistance provider as someone (1) whose actions are directed at improvement of individual or institutional performance, (2) who uses knowledge or knowledge-based products and services as key instruments of improvement, and (3) who occupies a position which spans institutional boundaries, linking knowledge resources developed in one setting with needs and opportunities which occur in another.

Accordingly, local school participants in the study sample were asked to identify those individuals who had helped them in the process of adoption, development, and/or implementation of a particular new practice. We categorized the respondents nominated in this manner into two types based on their location vis-a-vis the nominating school districts. "External" facilitators were individuals from outside the nominating school district who had given assistance; "local" facilitators were district personnel within the nominating school system but outside the school building, who were identified as having assisted school building staff with a particular new practice. We interviewed 96 external facilitators, including 80 who had worked with 97 schools (66% of the total sites in the sample). In addition, 78 local facilitators, who assisted 66 schools (45% of the total), also were interviewed. (See also Volume I, Tables 12 and 13).

Because our identification process was based on nomination rather than sampling from a known universe of facilitators, the respondents we interviewed were a much more diverse group than might otherwise have been the case. This diversity caused us to rethink some of our assumptions about the two types of facilitators. For example, at the start of the study we viewed the external facilitator role as the more formal, professional one, and the local facilitator role as more informal and likely to be performed as part of other duties. This proved not to be the case. While a sizable proportion of the external respondents could be labeled as "pure" professional facilitators, many of them had other salient roles which seemed to fall well outside the boundaries of such a definition. In fact, a few worked as facilitators either in addition to their main work or as a by-product of such work, making them more like local facilitators in some ways.

---

[15] Note that this section is much more detailed than previous ones. We justify this expanded treatment on the basis of the important implications for both policy and practice that can be drawn from an in-depth understanding of external assistance.

This ambiguity affirms the wisdom of our decision to collect information on discrete assistance behaviors irrespective of nomination or formal role designation; in data analysis, we could then allow the computer to cluster the range of facilitating behaviors without regard to their configuration in pre-designated role holders. In other words, we often counted, compared, and contrasted behaviors rather than individual perceptions or job descriptions.

A decision was made at an early point in the study to treat the local facilitators as a subset of the "administrator" category to which they typically belong (for example, 45% were curriculum coordinators); information was therefore collected from them both as administrators and as facilitators. In order to alleviate respondent burden, only selected site-specific assistance information was collected from these individuals. These data are discussed in this section; the administrator data are presented in Section 2.

We collected two types of data from external facilitator respondents: general information about the external facilitators themselves, their host agencies, and their general strategies; and targeted information about the specific assistance they gave to, and their perceptions of, local school systems in the study sample. Two sets of instruments were used: one interview protocol and one questionnaire for general data, and another protocol and questionnaire for site-specific information. A partial site-specific protocol and questionnaire were used to collect information from local facilitators, as we have noted.

For external facilitators, we examined several clusters of variables which we thought might influence site-specific assistance behaviors, and more distally, the impact of these behaviors on local site outcomes.[16] These clusters include:

- Program affiliation
- Personal characteristics
- Work setting
- Role parameters
- Strategic orientation
- General role performance

---

[16] A causal model exploring the antecedents and precedents of these clusters is discussed in Volume III.

For both external and local facilitators, we discuss two clusters of selected variables:

- Perceptions of local sites
- Site-specific assistance

As in earlier sections, we present more detailed information in the text for those variables found by our causal models to influence the outcomes of school improvement; for the technical reader, details for other variables (i.e., questions asked and response distributions) are included in the Appendix. For the convenience of the reader, reference is given at the end of each variable discussion to specific tables in the Appendix.

## Program Affiliation of External Facilitators

Most of the external facilitators in our sample had funded assistance roles within two federally-sponsored dissemination programs: these were the State Facilitators and Developer/Demonstrators of the National Diffusion Network (NDN); and the program developers of state-administered programs.[17] The sample also includes assistance-givers who became associated on an individual basis with ESEA Title IV-C locally developed projects (see Table 23).

Two BEH external facilitators were nominated as having worked with study schools but too late to be interviewed; indeed, as noted in Volume I (pp. 80-81), we had great difficulty locating BEH practices in use at all.

The NDN State Facilitators and Developer/Demonstrators perform different but complementary roles. State Facilitators tend to be generalists with regard to practices; Developer/Demonstrators are specialists with intimate knowledge of their innovations. Acting as a broker or arranger, each State Facilitator works with schools in a particular state, helping them to select among practices created by Developer/Demonstrators, who are themselves usually school-based practitioners. All practices available through the NDN have been validated in a federal review process as having demonstrable impact on student achievement or similar outcomes. One of the goals of the NDN is to facilitate dissemination of practices across state boundaries, so Developer/Demonstrators work with State Facilitators and schools across the country. This interstate focus seems to working: the external facilitators who worked with schools in the ten states of the study sample came from twenty different states.

---

[17] For a more detailed description of the federal programs than that which follows, see Volume I of this report series.

Table 23
Number of External Facilitators by Major
Role Groups in Three Federal Programs*
Data Source: External Agent Sample Lists**

| External Facilitators | Number in Sample |
|---|---|
| National Diffusion Network:<br>State Facilitators | 15 |
| National Diffusion Network:<br>non-Title I Developer/Demonstrators | 29 |
| National Diffusion Network:<br>Title I Developer/<br>Demonstrators and others | 22 |
| State-Administered<br>program developers<br>and others | 17 |
| Locally Developed Projects<br>(ESEA-Title IV-C) | 12 |
| Total Number = | 95 |

*One BEH external facilitator was interviewed in her role as project director; however, she had not worked with any sites in the study sample.

**Although we refer to non-district assistance providers as "external facilitators" throughout the text, we give the original titles of the instrument to facilitate locating specific items - hence the use of the term "external agent."

Some of the states in the study operate dissemination programs that are similar to the NDN but restricted to the identification and diffusion of exemplary practices within state boundaries. Personnel in the state departments of education or intermediate service units may serve as brokers or facilitators for state program developers. Many states have their own validation process to assure quality control. Partly because some of these dissemination systems began rather recently, the full impact of state efforts was not evident in the study, which concentrated on practices implemented in schools prior to the end of calendar year 1978. Three intermediate service unit personnel who assisted Title I adoptions, and two intermediate service unit staff who helped with state-administered adoptions (i.e., performing NDN State Facilitator-like functions), are included in the sample of external facilitators and are listed in Table 23 with the programs they assisted.

The fact that no other types of external facilitators were identified for the NDN and state-administered programs suggests the compactness of these assistance strategies: schools are able to search for and obtain both practices and assistance in a coordinated sequence, obviating the search for assistance from a variety of different sources. The latter process is a self-contracting approach that can be rewarding, but it is both complicated and time-consuming.

The external facilitators for the Title IV-C locally-developed projects were located by schools through the self-contracting method. The assisters varied greatly in the nature and scope of their help: some participated only in the design of one segment; others helped school staff intensively, working with them in a problem-solving capacity over several years' time. One site had called in ten different consultants to help with various aspects of the development/implementation process; others had done nearly everything themselves.

## Personal Characteristics of External Facilitators

Each individual brings a unique set of background attributes to a work role which influences its fulfillment. We suspected that external facilitators were entrepreneurs of a type, willing to take more risks than the average person, more tolerant of ambiguous assignments, more capable of coping with multiple roles, and surviving on the boundaries of organizations. We developed indices for assessing the presence of some of these qualities, as well as for measuring age, education, gender, and professional participation.

In terms of education, the sample of external agents is a highly trained group: 82% had at least a master's degree (Table 1.3.1). Our sample ranged in age: 40% of the sample were between 25 and 39 years of age, while 57% were between 40 and 60, and a few were near retirement. No one was under 25 (Table 1.3.2). Slightly more than half the respondents (55%) were women (Table 1.3.3).

We were particularly interested in external facilitators' tolerance for ambiguity. Two items on the general questionnaire measured their self-perceived capacity to cope with lack of clarity and lack of structure (Table 1.3.4). Respondents were asked the extent to which they agreed with each:

1. I like situations where the guidelines are not spelled out.
2. I am uncomfortable when people make vague requests of me.

The items were recoded into one variable measuring tolerance for ambiguity. Table 24 lists the frequencies for the recoded variable:

Table 24
External Facilitators' Tolerance
for Ambiguity
Data Source: External Agent General Questionnaire
(Scale = 2-8, high to low)

| | | Number of responses | Percent |
|---|---|---|---|
| high tolerance | (2) | 4 | 4.3% |
| | (3) | 5 | 5.4 |
| | (4) | 18 | 19.4 |
| moderate tolerance | (5) | 24 | 25.8 |
| | (6) | 31 | 33.3 |
| | (7) | 9 | 9.7 |
| low tolerance | (8) | 2 | 2.2 |
| N = | | 93 | 100.0% |
| Mean = 5.2 | | | |
| S.D. = 1.31 | | | |

It is perhaps noteworthy that on this two-item index, facilitators exhibit a moderate rather than high tolerance for ambiguity.

## Work Setting of External Facilitators

Because we knew that external facilitators worked in a range of different organizations, we wanted to understand the impact of these settings on their work. Most respondents were keenly aware of the advantages and disadvantages presented by their particular host organization, and most seemed to have found a way to enhance the advantages while minimizing the constraints. In this section we present data related to work settings.

External facilitators were affiliated with a variety of host organizations, local school districts being the largest single category. Respondents were also located in intermediate units, private firms, state education agencies, and universities and colleges (in descending order of frequency) (Table 1.3.5). These host organizations were located in 20 different states, including the 10 states in the study sample. The external facilitators from states outside our study sample were all NDN Developer/Demonstrators whose projects had been adopted by school districts within the study states.

Role groups differ significantly according to the type of host organization in which they work. More than half of each role group of Developer/Demonstrators -- including NDN non-Title I, NDN Title I, and state-administered program developers were housed in local school districts. There was a scattering of developer respondents located in intermediate units in addition to the "others" located in such organizations (see Table 23 discussion). NDN Developer/Demonstrators also had positions in universities and private organizations, usually not-for-profit companies. NDN State Facilitator respondents were distributed among intermediate units, private organizations, and state education agencies. The only other group housed in state education agencies were external facilitators for the locally developed projects. In fact, the external facilitators for this role group were distributed across every host organization category except for intermediate units (Table 1.3.6).

External facilitators worked in organizations which exhibit extreme variation not only in numbers of staff but also in the proportion of staff devoted to dissemination: the number of professional personnel ranged from 2 (a small private firm) to over 26,000 (a large metropolitan school district); the number of dissemination staff ranged from 0 to 50. The organization having no dissemination personnel was a private school; the respondent who worked there had rendered assistance to a Title IV-C locally developed project site (Tables 1.3.7 and 1.3.8).

We wanted to get a sense of how institutionalized the positions of external facilitators were. Accordingly, respondents were asked how long their positions had been established in their host organizations. The range of time was from 1 to 15 years. Positions had existed an average of 6.3 years. Of 51 respondents who answered the question, "If you were to leave your job, is it likely that it would be maintained in your organization?", 75% answered yes, 19% answered no, and 6% did not know (Tables 1.3.9 and 1.3.10).

During the general interview, respondents were asked to list the ways in which their work setting helped and hindered them in their service to schools. Only 5 respondents could list no advantages, whereas 34 could list only advantages. As might have been expected, a large number of both the positive and negative comments centered on the availability of financial and material resources -- space, staff, supplies, and money. However, more than half of the positive comments and nearly half of the negative focused on more intangible aspects of work setting. Respondents were particularly concerned with how their organizations facilitated access to outside clients and others within their own organization through the type of work of the organization, its reputation, and its nature and practices (Tables 1.3.11 and 1.3.12).

We wanted to learn whether an external facilitator's service area had any effect on his/her work with schools. We found that 45% of the respondents' service areas covered the entire USA, and another 44% covered a state or region, with 11% serving a smaller area (Table 1.3.13). When asked about problems with accessibility of schools, weather, and transportation, respondents reported that the only problem inhibiting service to clients was the weather (Table 1.3.14).

Finally, external facilitator respondents were asked about the assistance they themselves received in the course of performing their work roles, in three different categories: orientation, training, and technical assistance. Of the 90 in the sample who responded to the question, only six said they had received no assistance whatsoever. The remaining 84 respondents listed 224 sources of assistance. Sources of assistance that were clearly external to the individual faciitators' work settings accounted for 55.8% of the total number of respnses. Of these external sources, state education agencies were most frequently cited.

Looking at internal sources of assistance, it is apparent that host agencies, including project directors and other staff, did not do much orientation and training themselves -- only a tenth of the responses explicitly identified host organization sources. The informality and self-help emphasis of the assistance mentioned is striking: "informal communication with colleagues," "learning by doing," and "previous experience," account for 31% of the responses (Table 1.3.15).

The sense of informality persists when the nature of assistance received by external facilitators is examined. Forty-five of 83 respondents (54%) mentioned help received one-on-one and informally -- "he gave me advice; "she answered my questions" (Table 1.3.16).

## Role Parameters of External Facilitators

We conceptualized this cluster of variables as the framework structuring an individual's work role, the nexus of individual and organizational factors that might have impact on behavior. Variables in this cluster include, for example, the general definition of the role as determined by the respondent's title, his or her conception of the role as a career path, and the relative salience of this role among the various roles the facilitator might be performing.

The picture of external facilitators that has emerged from our analysis is one of career professionals who typically wear more than one hat. In some cases these other roles were also dissemination-related -- for example, managing an NDN project -- but, as we shall see, a sizable number of our respondents were content specialists or teachers who performed dissemination/implementation activities on a part-time basis.

We asked a number of questions concerning the external facilitator's role. Coding job titles presented a major challenge since respondents reported over a score of different labels. Finally, a dichotomous distinction was made between project directors and all others. Of the sample, 55 (64%) were project directors; 31 (36%) were either project staff or consultants of the type we labeled "lone operators."

Because we were interested in the impact of multiple roles on external facilitator behavior, we asked a number of questions about respondents' other roles beginning with, "Do you have any other formal jobs or responsibilities in addition to your work as (job title)?" From answers to this question we tallied the numbers of job titles presented in Table 25. More than a third of the respondents indicated that they had no other formal jobs or responsibilities, suggesting that they were able to concentrate a large proportion of their time to direct client assistance activities.

Table 25
Number of Other Job Titles of External Facilitators
Data Source: General Interview

| | Number of responses | Percent |
|---|---|---|
| 0 (no others) | 30 | 35.3% |
| 1 | 30 | 35.3 |
| 2 | 12 | 14.1 |
| 3 | 6 | 7.1 |
| 4 | 5 | 5.9 |
| 5 | 2 | 2.4 |
| N = | 85 | 100.0% |

Just about two-thirds of the sample had at least one other role. Administrative, supervisory, or management responsibilities were most often mentioned -- for example, the Developer/Demonstrator who was also both Director of Title I and of Bilingual Education for her home school district. This is not surprising, given the number of project directors in the sample. Other kinds of work respondents performed in addition to their jobs as external facilitators included college teaching, proposal writing, and consulting (Table 1.3.17).

Respondents who had more than one role were asked two additional questions about the rewards and problems created by multiple roles: "Do your roles or responsibilities combine to make your job more rewarding than it would be with only one set of roles or responsibilities?" and "Does having these additional roles or responsibilities create any problems for you?" Of the 58 external facilitators who answered these questions, only 2 either felt there were no rewards or could not name any; in contrast, 21 listed only rewards and no problems.

The kinds of rewards mentioned by respondents support Sieber's (1974) thesis that multiple role occupancy offers benefits that compensate for the role overload and role conflict problems often described in social psychological literature. In our study, the most frequently cited categories of rewards were: 1) that multiple roles complemented one another and/or were interrelated, meaning that effort in one aspect of one's work had positive ramifications in other parts -- Sieber called this transference; 2) that multiple roles allowed for diversity and variety in one's work life -- respondents felt they could pick and choose tasks to work on; 3) that multiple roles offered benefits to others -- for example, a practitioner performing dissemination/implementation activities could bring home new ideas to his or her home district; and finally; 4) that multiple roles offered greater self-development opportunities than single roles.

Mentioned with less frequency were the credibility and leverage accruing to the holder of more than one role; these were also cited by Sieber as transference benefits. For instance, facilitators who also were practitioners commented that they had increased credibility with client teachers because of their teaching roles.

On the negative side, constraints felt by 23 of the 37 who answered the question about problems of multiple roles had to do with time. Role overload is perhaps the endemic problem of multiple role-holders, who face the same challenges as single role-holders and must manage roles logistically in addition. In fact, self-management was another problem cited by respondents along with role conflict -- as one respondent noted, "Everyone wants 100%" (Tables 1.3.18 and 1.3.19).

We ascertained from respondents' comments that the attitudes of host organizations toward external facilitator activities varied greatly. On the one side, there were organizations for which such work was the main mission -- for example, a private, non-profit firm founded specifically for carrying on curriculum development and implementation assistance activities. On the other side were organizations whose dominant task was something else -- for instance, school districts where the main business is teaching local children, not flying across the country to assist other schools. A Developer/Demonstrator housed in a local school district might have been speaking for many external facilitators whose activities are marginal to their host agencies when she commented that a priority was "keeping the home fires burning." She explained that as long as everything she was responsible for was running smoothly in her home district, nothing was said about her NDN project activities away from home.

To learn about job autonomy, we asked external facilitators to describe who determined the way they carried out their work. Responses indicate that they had considerable leeway in structuring their work roles, either doing so themselves, or in coordination with co-workers or their project director (Table 1.3.20).

External facilitators were asked a number of questions during the general interview about their work history. In our sample, 33% had been in their current positions less than 3 years, 24% had been on the job more than 3 but less than 5, and about 43% had been on the same position for more than 5 years -- a rather stable group (Table 1.3.21)! Interested in how the external agent came to occupy his or her position, we found that more than half the respondents had moved to their current jobs from others within the same organization (Table 1.3.22). In their previous positions very few were formal external facilitators; rather, most were either teachers or administrators (Table 1.3.23). However, when asked whether in their previous jobs they had performed any services related to the introduction of new practices or products to schools, many responded affirmatively. Of the 89 who answered the question, only 16 had not performed such services. The 73 respondents who answered the question affirmatively were asked to describe the facilitative services they had provided. These included developing curriculum, training teachers, and disseminating information (Table 1.3.24). Since 76% of the respondents reported being either administrators or teachers in their previous jobs, it's tantalizing to think that they may have been the equivalent of local facilitators in those earlier roles.

To assess the professional activities of external facilitators, we looked at two items: the number of professional journals they read, and the number of professional organizations to which they belonged. We found that 76% of the sample read at least two journals regularly, and 56% read three or more. A large majority of our sample (81%) belonged to two or more professional organizations, and 53% claimed three or more memberships (Tables 1.3.25 and 1.3.26).

We also were interested in the sources of job satisfaction and dissatisfaction of the external facilitators in our sample. We asked them to describe both, and we received 375 responses from 89 respondents. Positive comments outweighed the negative, accounting for 59% of the total. Nine respondents had no negative comments at all. The answers to each question were content-analyzed and are presented in Tables 26 and 27.

Table 26
Sources of Job Satisfaction of External Facilitators
Data Source: External Agent General Interview
Content Analysis
N answering question = 89

| | N of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Works with/contributes to education | 49 | 22.1% | 55.1% |
| Works with/meets people | 31 | 14.0 | 34.8 |
| Professional growth | 30 | 13.5 | 33.7 |
| Program/content success | 27 | 12.2 | 30.3 |
| In all ways (general statement) | 23 | 10.4 | 25.8 |
| Flexibility/variety | 17 | 7.7 | 19.1 |
| Connection to NDN/other program | 7 | 3.1 | 7.9 |
| Influence | 6 | 2.7 | 6.7 |
| Feel positive about education | 6 | 2.7 | 6.7 |
| Helps others communicate | 5 | 2.2 | 5.6 |
| Good pay | 4 | 1.8 | 4.5 |
| Characteristic of host organization | 4 | 1.8 | 4.5 |
| Solves social problem | 3 | 1.3 | 3.4 |
| Other | 10 | 4.5 | 11.2% |
| Total N of responses = | 229 | 100.0% | |

Over half the sample mentioned that making a contribution to education was a satisfying part of their work as external facilitators. Having the opportunity to meet and work with interesting people was the next most frequently mentioned theme, followed closely by comments having to do with professional growth opportunities. Seeing success with particular programs or subject areas was another source of satisfaction frequently cited by respondents.

The importance of facilitator roles as professional development and career-enhancing opportunities for experienced practitioners and school-based administrators comes through in the comments of respondents. One suspects that a sizable number of creative, entrepreneurial educators would be lost to the profession were such roles to disappear.

Table 27
Sources of Job Dissatisfaction of External Facilitators
Data Source: External Agent General Interview
Content Analysis
N answering question = 80
N answering "no dissatisfaction" = 9
89

| | N of responses | Percent of total responses | Percent of N answering question |
|---|---|---|---|
| Lack of time | 24 | 15.7% | 30.0% |
| Characteristics of the job | 21 | 13.7 | 26.3 |
| Attitudes of others | 18 | 11.8 | 22.5 |
| Bureaucracy/politics | 17 | 11.1 | 21.3 |
| Insufficient funding | 16 | 10.5 | 20.0 |
| Socio-emotional state/lack of personal growth | 15 | 9.8 | 18.7 |
| Insufficient program success | 15 | 9.8 | 18.7 |
| Hassles of travel | 8 | 5.2 | 10.0 |
| Lack of support | 7 | 4.6 | 8.8 |
| Proposals/paperwork | 4 | 2.6 | 5.0 |
| Lack of professional growth | 4 | 2.6 | 5.0% |
| Total N of responses = | 153 | 100.0% | |

Negative comments (see Table 27) focused primarily on the frustrations of getting the job done: lack of time and characteristics of the job were the two themes most often mentioned. External constraints -- the attitudes of others (e.g., educators who did not want to grow), bureaucracy and politics, and insufficient funding -- were mentioned by at least one-fifth of the sample. Of the respondents, 15 out of 80 offered insufficient program success and lack of personal growth (in contrast to professional growth) as sources of dissatisfaction in their work.

In addition to the immediate sources of satisfaction and dissatisfaction for external facilitators, we also were interested in the career goals of the facilitators. Of 155 responses from 82 individuals, 35 indicated a desire to continue in their present positions; 25 responses indicated a wish to develop new programs. Other responses to the career question included jobs outside of education, retirement, advanced degrees, and teaching or administration (Table 1.3.27).

## Strategic Orientation of External Facilitators

We knew external facilitators of differing types espoused a range of philosophies about school improvement and used a variety of tactics in their work with schools. We expected that these general orientations would affect behavior. Accordingly, a number of questions related to orientation were asked in interviews and on questionnaires; we review the findings in this section.

### External Facilitator Strategy

After respondents described their activities with local schools during site-specific interviews, they were asked if their particular behavior constituted a strategy. The term was not defined by the interviewer except to indicate that we were interested in the respondent's individual strategy or way of doing things, not the general project approach. If the response was "yes," they were asked to describe the strategy. The answers were coded using pre-specified categories; Table 28 indicates the distribution according to these categories. To obtain strategy information for those individuals who had no local sites in the study sample, we used the same coding procedure on answers to a similar question from the general interview. These are included in Table 28.

Table 28
External Facilitator Strategy
Data Source: Site-Specific Interview

| | Number of responses | Percent |
|---|---|---|
| Touch and Go | 24 | 29.6% |
| Intensive/Client Centered | 20 | 24.7 |
| Broker | 13 | 16.0 |
| High Structure | 4 | 4.9 |
| Other | 12 | 14.8 |
| No Strategy | 8 | 9.9 |
| N = | 81 | 100.0% |

Nearly 30% of the sample's strategies were classified as touch-and-go approaches. The focus of the touch-and-go style is dissemination -- awareness building and initial adoption activities centered on particular products or practices with little emphasis on delivery of services beyond initial training. One could characterize this approach as "scattering seeds" or the Johnny Appleseed method: although care may be taken to match schools and practices, some adoptions will fall on fertile ground and take root, some will land in the wrong places or not thrive for one reason or another. In any case, like Johnny Appleseed, the external facilitator usually does not participate after the initial steps, leaving the care and tending to local folks except perhaps for long-distance advice-giving.

In contrast, almost one quarter of the respondents were characterized as employing intensive/client-centered strategies. The hallmarks of this approach are concern about the needs of schools, and willingness to adapt practices or processes to meet those needs. Facilitators of this style tend to be involved with client schools beyond the initial adoption stages into implementation and even evaluation.

Based on their descriptions, we characterized 16% of the sample as brokers, facilitators who work to link schools with resources -- new products, practices, and the like. Most of the State Facilitators of the National Diffusion Network fell into this category. Facilitators of this style differed in the amount of contact they had with client schools. Some sought to connect clients to new practices at the highest administrative levels of education systems and therefore had little or no contact with individual schools; others worked with individual school personnel but had little contact after initial adoption of a new practice, although they might work with the same staff on another problem. Still others attempted to match schools with needed resources all the way through an adoption/implementation process.

Another distinctive facilitator approach is the high structure strategy. Only 5% of the sample were assigned to this category. High structure strategists focus on the practice and prescribe a staged implementation process, allowing little flexibility in how the steps are mastered. Facilitators of this style work closely with adopters to achieve fidelity to the original practice.

Four different codes were combined to create the "other" category, which accounts for about 15% of the sample. Included in this category are a purely economic strategy, plus such political approaches as strategic manipulation or networking within the informal school structure, and bureaucratic processing, which emphasizes the administrative chain of command in a district. An original "other" category is also included. Each of these had only a few designees.

Finally, respondents who said they did not follow a strategy in their work with schools were assigned to a no strategy category. Only 10% fell into that classification.

Some respondents clearly were familiar with, and attempted to apply, theories of educational change -- for example, one external facilitator indicated that he used Havelock's linkage model. Many facilitators, however, appeared to operate largely instinctively and had to think about their approaches before articulating them.

## Specific Product, Product Choice, and Capacity Orientations

We next explored facilitators' orientations from a slightly different angle, looking at the degree to which respondents were focused on a particular product or practice, versus a focus on product choice or on the general process of helping schools. Table 29 presents the raw frequencies for three items which attempted to tap such contrasts. Respondents were asked to rate the extent to which they agreed with three statements.

Table 29
Specific Product, Product Choice, and Capacity Orientations
Data Source: External Agent General Questionnaire

| Item | Strongly agree = 1 | Agree = 2 | Disagree = 3 | Strongly disagree = 4 | Mean |
|---|---|---|---|---|---|
| I am primarily concerned with advocating or demonstrating one particular product, practice, or knowledge resource. (N = 87) | 20 | 21 | 24 | 22 | 2.5 |
| I am primarily concerned with assisting local schools in selecting and implementing practices or products of their choice to solve specific problems they have identified. (N = 85) | 45 | 26 | 10 | 4 | 1.6 |
| I am primarily concerned with helping schools to build their own capacity for school improvement. (N = 86) | 38 | 34 | 7 | 7 | 1.8 |

One can see by looking at the sample means that the respondents as a group were slightly more oriented toward product choice than capacity building, with specific product orientation in third place. However, responses to these items were not intended to be mutually exclusive: an individual might agree with more than one item. This formating represented our belief that the product/process contrast, for example, is a continuous rather than a dichotomous variable. Therefore, in order to assess where individual respondents lay on selected dimensions represented in the items, we created derived variables that subtracted scores on items from one another, thus creating an index. Table 30 displays the distribution of the sample on the dimension of specific product versus product choice orientation.

Table 30
Specific Product versus Product Choice Orientation
Data Source: External Agent General Questionnaire

| | | Number of responses | Percent |
|---|---|---|---|
| Low specific product orientation/high product choice orientation = | 0 | 20 | 24.7% |
| | 1 | 13 | 16.0 |
| | 2 | 15 | 18.5 |
| | 3 | 13 | 16.0 |
| | 4 | 14 | 17.3 |
| | 5 | 6 | 7.4 |
| High specific product orientation/low product choice orientation = | 6 | 0 | 0.0 |
| N = | | 81 | 100.0% |

As Table 30 indicates, the sample of respondents tilts toward the product choice end of the continuum. The sample mean was 2.1.

### Local/Cosmopolitan Orientation

To learn about external facilitators' collegial orientations, respondents were asked, "What groups do you identify with professionally? Whom do you consider to be your professional colleagues?" Up to four responses were coded for each individual.

Respondents tended to identify two different groups of colleagues: one set consisted of school district-based personnel, the other of educators in other settings. Table 31 displays the categories of colleagues mentioned by the sample.

### Table 31
### Types of Professional Colleagues
Data Source: External Agent General Interview
Content Analysis
N answering question = 90

| | N of responses | Percent of total responses | Percent of N answering question |
|---|---|---|---|
| Teachers | 37 | 15.2% | 41.1% |
| Curriculum/content | 28 | 11.5 | 2.0 |
| Own colleagues on staff | 16 | 6.5 | 17.7 |
| Superintendents | 16 | 6.5 | 17.7 |
| Professional association of educators | 15 | 6.4 | 16.6 |
| Principals | 14 | 5.7 | 15.5 |
| State education agency staff | 14 | 5.7 | 15.5 |
| College/university | 14 | 5.7 | 15.5 |
| Program director | 12 | 4.9 | 13.3 |
| Other NDN colleagues | 11 | 4.5 | 12.2 |
| Others in same federal/state program | 9 | 3.7 | 10.0 |
| Others outside education | 9 | 3.7 | 10.0 |
| Other school district personnel | 7 | 2.8 | 7.7 |
| Educators in general (not specific) | 7 | 2.8 | 7.7 |
| Researchers | 6 | 2.5 | 6.6 |
| Independent consultants | 6 | 2.5 | 6.6 |
| Other building personnel | 5 | 2.1 | 5.5 |
| Local school district staff using program | 4 | 1.6 | 4.4 |
| Catalytic-innovative educators | 4 | 1.6 | 4.4 |
| Innovators in general | 1 | 0.4 | 1.1 |
| Other | 9 | 3.7 | 10.0% |
| Total N of responses = | 244 | 100.0% | |

We wondered whether any respondents were "pure types" -- that is, they mentioned either all school-based personnel or all educators in other settings. We therefore created a derived variable which sorted each individual's responses into two classes: the first included school-based educators and was labelled "local"; the second covered educators in other settings (researchers, NDN members, etc.) and was labelled "cosmopolitan"; an additional category for responses listing both kinds of educators was included and labeled, "mixed." Table 32 presents the sample's distribution on this dimension.

Table 32
Local/Cosmopolitan Orientation
Data Source: External Agent General Interview

| | Number of responses | Percent |
|---|---|---|
| Local | 13 | 15.3% |
| Mixed | 58 | 68.2 |
| Cosmopolitan | 14 | 16.5 |
| N = | 85 | 100.0% |

As befits their position as "linkers" in the educational change process, more than two-thirds of the respondents were of "mixed" orientation, as Table 32 indicates. However, nearly a third were "pure types" on this variable, being either local or cosmopolitan in orientation. As we shall see in our discussion of causal models in Volume III, this appears to make a difference in their work.

## Opinions about Adaptation

We wanted to understand how external agents who worked with one or more educational practices felt about adaptation. All respondents except for facilitators who worked with Title IV-C development projects were asked, "Do you feel it's okay for you to allow adaptation of a resource or practice?" And, if yes, "What kinds of adaptations do you allow?" (Title IV-C development project facilitators, by definition, did not work with adopters of external practices, and so we believed it would be irrelevant to ask them this question.) Of 79 in the sample who answered the question, 8 replied that they did not allow any adaptations. Table 33 presents the content-analyzed responses of the 71 individuals who did allow changes. As Table 33 indicates, 35% of those who did allow changes indicated that they subscribed to the philosophy that all implementations require that practices be changed -- "every adoption (of a new practice) is an adaptation."

Table 33
Types of Adaptations Allowed by External Facilitators
Data Source: External Agent General Interview
Content Analysis

N answering question = 71
N answering "No adaptations allowed" = 8
79

| | N of responses | Percent of total responses | Percent of N answering question |
|---|---|---|---|
| Adjustments on needs basis | 38 | 23.9% | 53.5% |
| Adaptation as a philosophy | 25 | 15.7 | 35.2 |
| Materials/modifications/ substitutions | 18 | 11.3 | 25.6 |
| Staffing modifications/ substitutions | 17 | 10.7 | 23.9 |
| Management practices can vary | 16 | 10.1 | 22.5 |
| Student populations can vary | 12 | 7.6 | 16.9 |
| Addition of components | 8 | 5.0 | 11.3 |
| Facilities can vary | 8 | 5.0 | 11.3 |
| Training can vary | 5 | 3.1 | 7.0 |
| Expansion of program | 3 | 1.9 | 4.2 |
| Other | 9 | 5.7 | 12.7% |
| Total N of responses = | 159 | 100.0% | |

## General Role Performance of External Facilitators

As one means of gathering information about assistance, we created an activities questionnaire containing items originally compiled at the Belmont Conference on Linking Functions (Havelock, 1979). All the external facilitator respondents completed an activities questionnaire concerning their general work with client schools; those who had worked with one or more of the particular sites in the study sample were asked to complete an additional activities list for each one. This section on external facilitator behavior is based on analysis of general assistance data.

To begin with, respondents were asked to divide their work time into two categories -- direct contact with clients and ongoing maintenance tasks -- and to assign percentages to each. The sample as a whole spent just about half (50.5%) of their work-time interacting with clients. The other half (49.6%) of their time was spent on routine maintenance tasks associated with their roles (administration, professional development, travel, and in-house product development). The amount of time respondents spent on client-related activities ranged from 2% to 90%; they devoted from 10% to 98% of their time to ongoing aspects of their work (Tables 1.3.28 and 1.3.29).

We turn now to discussion of each of these parts of general role performance, beginning with client-related work.

## Work with Clients

The client work activities were grouped in five categories representing different stages of an adoption/implementation process. Respondents were asked to assign percentages according to the proportion of work time they spent on each set of activities. Table 34 presents the categories, along with the distribution of the sample's time with clients, expressed in means.

Table 34
Five Categories of External Facilitator
General Client Assistance Activities
Data Source: General Questionnaire

| | Percent of Time Spent on Activity (Sample Mean) |
|---|---|
| 1. Initiating relationships (e.g., holding awareness conferences, distributing flyers)<br>N = 80 Mode = 10%<br>S.D. = 18.46 Median = 20.40% | 25.1% |
| 2. Assisting clients in deciding on new practices (e.g., persuading teachers, seeking support, assessing needs)<br>N = 82 Mode = 10%<br>S.D. = 9.31 Median = 14.18% | 15.6% |
| 3. Assisting clients in preparing for adoption (e.g., training users, securing materials)<br>N = 80 Mode = 20%<br>S.D. = 16.73 Median = 22.50% | 26.4% |
| 4. Assisting clients in implementing practices (e.g., planning implementation schedules, "putting out fires")<br>N = 83 Mode = 10%<br>S.D. = 14.55 Median = 15.44% | 19.0% |
| 5. Follow-up activities (e.g., collecting impact data, assisting in local site evaluation)<br>N = 83 Mode = 10%<br>S.D. = 12.13 Median = 10.37% | 15.0% |
| Total time dealing with clients: | 101.1%<br>(50.5% of total work time) |

The respondents as a group distributed their time fairly evenly across the five categories of assistance. Over half their client time was spent initiating relationships and assisting schools in adoption preparation, with the other half of their field-oriented time devoted to helping with practice selection, implementation, and follow-up. Let us now take a closer look at each of these categories.

Table 35 is a display of all the items on the client assistance activities list with the mean scores for the sample of external facilitator respondents. Respondents were asked to indicate the amount of time they spent on each activity, ranging from 0 (never) to 5 (more than once a day).

Not surprisingly, the two most frequently performed behaviors fell within the two categories of activity on which respondents indicated they spent the largest chunks of their time: contacting new clients by mail, telephone, or in-person as part of initiating relationships; and providing detailed information as an aspect of assisting schools in adoption preparation.

Table 35
General Client Assistance Activities of External Facilitators
Data Source: General Questionnaire

| Activity | Amount of Time Spent on Activity (Sample Mean) |
|---|---|
| 1. Initiating Relationships | |
| a. Arranging or participating in awareness conferences (N = 85; S.D. = 1.04) | 2.1 |
| b. Distributing general information (e.g., flyers, newsletters) (N = 85; S.D. = 1.38) | 2.4 |
| c. Hosting visits to review materials (N = 85; S.D. = .92) | 1.6 |
| d. Holding demonstration visits (N = 85; S.D. = .97) | 1.7 |
| e. Contacting new clients by mail, telephone, or in person (N = 85; S.D. = 1.56) | 2.8 |
| 2. Assisting Clients in Deciding on New Practices | |
| a. Seeking commitment from school administrators (N = 84; S.D. = .86) | 2.0 |
| b. Seeking commitment from teachers (N = 84; S.D. = 1.11) | 1.9 |
| c. Seeking support from local school boards (N = 81; S.D. = .94) | 0.8 |
| d. Preparing a "case" for the decision to adopt (N = 82; S.D. = .99) | 1.3 |
| e. Assessing needs (N = 82; S.D. = .93) | 1.7 |
| f. Building support among school personnel (N = 82; S.D. = 1.07) | 2.0 |
| g. Making library and computer search for materials (N = 82; S.D. = 1.05) | 0.9 |
| 3. Assisting Clients in Preparing for Adoption | |
| a. Arranging training (N = 83; S.D. = 1.01) | 2.0 |
| b. Training the users (N = 84; S.D. = 1.03) | 1.8 |
| c. Providing detailed information (N = 84; S.D. = 1.14) | 2.7 |
| d. Securing materials or other required resources (N = 83; S.D. = 1.15) | 2.1 |
| e. Working with administrators (N = 85; S.D. = .96) | 2.4 |
| f. Working with site contact (N = 85; S.D. = 1.02) | 2.3 |
| g. Allocating financial resources (N = 82; S.D. = 1.18) | 1.6 |
| h. Maintaining support among school personnel (N = 84; S.D. = 1.12) | 1.9 |

Table 35 (Continued)

| Activity | Amount of Time Spent on Activity (Sample Mean) |
|---|---|
| 4. Assisting Clients in Implementation | |
| a. Planning implementation schedules (N = 84; S.D. = .97) | 1.9 |
| b. Providing technical assistance or follow-up training (N = 86; S.D. = .93) | 2.2 |
| c. Assisting teachers in working out procedural details (N = 85; S.D. = 1.04) | 1.8 |
| d. "Putting out fires" (N = 83; S.D. = .95) | 1.6 |
| e. Maintaining support among school personnel (N = 83; S.D. = 1.10) | 1.8 |
| 5. Follow-Up Activities | |
| a. Collecting impact data (N = 85; S.D. = .81) | 1.4 |
| b. Analyzing impact data (N = 85; S.D. = .80) | 1.3 |
| c. Assisting local site to conduct evaluation of new practice (N = 85; S.D. = .90) | 1.3 |
| d. Developing plan to support continuation of new practice (N = 85; S.D. = .83) | 1.3 |
| e. Developing additional new users at site (N = 84; S.D. = .96) | 1.2 |

Scale:

0 = never
1 = about once a year
2 = about once a month
3 = about once a week
4 = about once a day
5 = more than once a day

We wanted to understand how external facilitators felt about individual assistance activities, so respondents were requested to designate their first and second choices in the following categories: important, unimportant, enjoyed, and disliked.

Of all the individual items making up the general activities list, "training the users" was rated not only "most important" but also "most enjoyed" most frequently: 23% of the respondents rated it "most important" as either their first or second choice; 46% counted it "most enjoyed" either first or second. The two categories begin to diverge after this point. "Seeking commitment from school administrators" was ranked second in importance based on number of mentions, but "arranging or participating in awareness conferences" was rated second on the enjoyment scale. "Seeking commitment from teachers" came in third on the most important list, while "providing technical assistance or follow-up training" was third in the most enjoyed category. No other items received more than 11 total mentions in either category (Tables 1.3.30 and 1.3.31).

Fewer external facilitators -- an average of 40 -- completed the items concerning unimportant and disliked activities. "Making library and computer searches for materials," was rated "most unimportant" by 23 respondents. "Fighting fires" was rated "most disliked" by 20 respondents, followed by "collecting impact data," which was cited by 18 facilitators. As in the other categories, the other responses were scattered among many other items.

## Ongoing Work

The ongoing, role maintenance part of the external facilitator's role -- activities that did not involve client contact -- was divided into four components. As with the client-related work categories, respondents were asked to assign percentages according to the amount of time they spent on each in the course of their work. Table 36 presents the categories with the distribution of the sample's time among them, expressed in means.

Table 36
Four Categories of External Facilitator
Role Maintenance Activities
Data Source: External Agent General Questionnaire

| | Percent of Time Spent on Activity (Sample Mean) |
|---|---|
| 1. Administration (e.g., planning, preparing budgets, managing staff) | 35.3% |
| N = 82 Mode = 50%<br>S.D. = 21.58 Median = 31.00% | |
| 2. Professional development (e.g., attending staff development workshops, writing articles) | 19.2% |
| N = 83 Mode = 10%<br>S.D. = 14.59 Median = 14.96% | |
| 3. Travel (e.g., time actually spent traveling from place to place, or time in transit) | 22.0% |
| N = 84 Mode = 10%<br>S.D. = 16.32 Median = 19.65% | |
| 4. In-house product development (e.g., developing information packages or evaluation materials) | 20.8% |
| N = 83 Mode = 10%<br>S.D. = 14.95 Median = 19.73% | |
| Total time spent on ongoing tasks: | 97.3%<br>(49.7% of total work time) |

As one might expect, the greatest amount of role maintenance time -- over a third -- was spent on administrative responsibilities, with travel, product development, and professional development each taking up about a fifth of ongoing work role time.

When looked at in more detail (see Table 37), the activities the sample as a whole reported performing nearly once per week included "planning activities," "managing staff," "traveling to meet with clients," and "locating, reading, and processing materials about your job or field." The frequency with which the last activity was mentioned is interesting in light of the item on the client assistance activities list which concerns "making library and computer searches for materials." That item was the second least frequently performed activity in the client work list. It appears that external facilitators are very active in seeking out new knowledge as part of their ongoing work role, although they do not tend to perform this function as a service to clients.

## Table 37
## Ongoing Role Maintenance Activities of External Facilitators
Data Source: External Agent General Questionnaire

| Activity | Amount of Time Spent on Activity (Sample Mean) |
|---|---|
| 1. Administration | |
| a. Planning activities (N = 83; S.D. = 1.27) | 3.2 |
| b. Preparing budget (N = 83; S.D. = 1.03) | 1.4 |
| c. Writing progress reports (N = 83; S.D. = .79) | 1.7 |
| d. Writing proposals (N = 83; S.D. = .76) | 1.1 |
| e. Responding to surveys (N = 82; S.D. = .82) | 1.6 |
| f. Managing staff (N = 82; S.D. = 1.85) | 2.8 |
| g. Keeping financial records (N = 83; S.D. = 1.36) | 2.2 |
| 2. Professional Development | |
| a. Attending conferences of professional organizations (N = 83; S.D. = .63) | 1.5 |
| b. Attending staff-development workshops (N = 83; S.D. = .82) | 1.6 |
| c. Locating, reading, and processing materials about your job or field (N = 83; S.D. = 1.26) | 2.7 |
| d. Writing articles (N = 92; S.D. = 1.03) | 1.2 |
| e. Consulting for others (N = 81; S.D. = 1.48) | 2.2 |
| 3. Travel | |
| a. Traveling to meet with clients (transit time) (N = 81; S.D. = .89) | 2.7 |
| b. Traveling to professional conferences (transit time) (N = 81; S.D. = .68) | 1.7 |
| 4. In-house Product Development | |
| a. Developing information packages for target audiences (N = 82; S.D. = 1.04) | 1.8 |
| b. Designing training plans and materials (N = 82; S.D. = .95) | 1.8 |
| c. Preparing evaluation materials to assess impact of new practices (N = 83;S.D. = .86) | 1.4 |
| d. Developing library of materials (N = 81; S.D. = 1.06) | 1.3 |
| e. Developing general information materials (e.g., flyers, newsletters) (N = 83; S.D. = .87) | 1.5 |

Scale:

0 = never
1 = about once a year
2 = about once a month
3 = about once a week
4 = about once a day
5 = more than once a day

## Perceptions of Local Sites by External Facilitators and Local Facilitators

We were interested in the characteristics of local sites that facilitators thought were important for successful school improvement efforts. We collected information about a number of variables from both external and local facilitators, and in this section we compare their answers.

For each local site with which they worked, respondents were asked to list the reasons school personnel adopted a new practice. The reasons given were diverse -- the most often cited reason accounted for only 20% of the responses for each group. The reason most frequently mentioned by both types of facilitators was that the particular practices adopted were congruent with general site needs -- in other words, there was a perceived match. In fact, the existence of a need pervaded a great number of the responses to this item: needs perceived by teachers, and administrators and staff in general, needs of special students, and needs of districts to increase achievement scores. The other reasons why school personnel adopted a new practice were not related to need: e.g., the practice was mandated, it was inexpensive, the district prized innovativeness in general. The two samples of facilitators differed in the degree to which they cited need-related reasons for district adoption. Fifty-seven percent of the external facilitators' comments mentioned need, while 71% of the answers of local facilitators centered on need. It seems reasonable that local facilitators, as school district staff, would perceive need more often (Table 1.3.32).

We gathered information from both external and local facilitators about the existence and role of advocates of the practices at the local sites, as well as about the kinds of support provided by the school system. A discussion of these data can be found in Chapter II: The Backdrop for Improvement. In addition, the external facilitator respondents were asked a number of other questions about the districts and schools with which they had worked. We asked them about the changes each district had to make in the implementation of a new practice. Changes most frequently cited by respondents were administrative (management and coordination); teacher-related (changes in planning, scheduling, preparation); content-related (following a new method of instruction); and resource-related (district had to acquire funds, facilities, etc.). It is interesting that only 10% of the comments explicitly concerned acquisition; most practice adoption and development seemed to have been accomplished by rearrangement of existing resources, according to external facilitators. It is also intriguing that 15% of the cases involved making no changes at all (Table 1.3.33).

We also were interested in what school district characteristics external facilitators perceived as important for success in school improvement efforts. Sixty percent of the sample mentioned that the school district must value change, that there must be a climate for change for the improvement effort to succeed. The second most frequently cited factor, mentioned by more than half of the respondents, was that the school district had to make a commitment to change; such efforts could not be undertaken lightly. Administrative leadership was third, listed by nearly a third of the sample (Table 1.3.34).

Those external facilitator respondents who had worked with local sites in the study sample were asked a related question about the features of each specific district that influenced their work with the district. Responses were concrete examples of commitment and climate for change. For instance, respondents felt it was important that administrators were receptive and that they were actively involved. They cited as significant the same characteristics for teachers and mentioned in addition the importance of teacher drive and initiative (Table 1.3.35).

## Site-Specific Assistance by External Facilitators and Local Facilitators

The study of assistance to local sites focused primarily on understanding the separate contributions of external facilitators and local facilitators; in the causal models, these were examined as individual strands. On analyzing these separate pools of data, we began to realize that the configuration of assistance to local sites might help to illuminate the impact of help from external and local facilitators. Accordingly, in this section, we discuss not only the type of assistance given by each sample of respondents, but also data concerning the effects of different patterns of external and local help. Lack of resources prevented us from undertaking full analyses of such patterns, but the preliminary observations are intriguing in and of themselves.

Before describing the assistance external facilitators gave to specific local school sites, it is important to explain in more detail the manner in which they were likely to work. The National Diffusion Network and many state-administered dissemination programs are precisely that -- diffusion and dissemination programs. Because their primary aims have been to spread exemplary practices, they have emphasized extensive over intensive services, adoption over implementation activities. While NDN State Facilitators help with arrangements for adoption, and Developer/Demonstrators from the NDN and developers from state programs provide training in the practice and some support, the fitting of the innovation in the host district is left largely to the locals. Considerable assistance is provided away from the actual implementation site, in group training sessions or, in the case of follow-up help, through telephone conversations. The picture of the Title IV-C assisters, where local invention/experimentation and development are the goals, is more varied: some of these consultants worked on a long-term basis with a site through the whole development and implementation process; others provided components of practices without much involvement in the site; still others worked intermittently through the planning/implementation process, contributing heavily at the evaluation phase.[18]

One should not assume, then, that assistance means help rendered on the site, face-to-face, or continuously. Therefore, knowing the federal strategies we were studying, we expected that while many external agents worked with local district or school personnel to facilitate the implementation of a new practice, relatively few of them would have intimate knowledge of the innovation in place in the classroom. This proved to be the case. The question respondents answered was, "Are you familiar with (the practice) at (the school building)?"

In 48 of the 131 cases of assistance, respondents said they were familiar with the practice at the site; in 83 of the cases, they reported they were not.

The picture of practice-related assistance becomes more complicated when the responders to this question are sorted by role groups. Table 38 displays the distribution of the five major role groups on the question of familiarity with the practice at the site. The external facilitators most familiar with practices at the sites were those who had worked with Title IV-C locally developed projects. Next most familiar as a group were state-administered program developers, who, as we shall see, were most likely to have begun their work directly with the school building rather than the district; this suggests that they had the opportunity to be acquainted with the practice in its local setting. NDN Title I D/Ds, NDN SFs, and NDN non-Title I D/Ds (in descending order) were as groups least familiar with practices at the local sites. That the two D/D groups do not tend to know the practices in their settings is not surprising, given their national focus. State Facilitators, on the other hand, had often been to their sites, but because of their generalist roles, had not focused on the practices.

---

[18] Note that only three external facilitators were identified for the BEH Market Linkage Program. One respondent -- a developer -- had worked with no sites in the sample; the other two were identified too late to be interviewed. Therefore, no external facilitator data are available for the BEH program. Our experience in attempting to identify facilitators for the BEH Market Linkage Program leads us to believe that external assistance does not exist for this program.

### Table 38
### External Facilitator Familiarity with the Practice at the Site by Program
### Data Source: External Facilitator Site-Specific Questionnaire

| | Yes | No | | |
|---|---|---|---|---|
| Title IV-C locally developed projects | 75% ( 9) | 25% ( 3) | = | 100% ( 12) |
| State-administered programs | 58% (14) | 42% (10) | = | 100% ( 24) |
| NDN Title I [illegible] | 31% (10) | 69% (22) | = | 100% ( 32) |
| NDN non-Title I State Facilitators [illegible] | 25% ( 4) | 75% (12) | = | 100% ( 16) |
| NDN non-Title I [illegible] | 23% (11) | 77% (36) | = | 100% ( 47) |
| N of cases = | 37% (48) | 63% (83) | = | 100% (131) |

We wanted to understand whether external facilitators differed in their initial approaches to schools; for example, whether some gained entry to the schools through contacts at the individual building level rather than at the district level. Knowing the level of entry was also important for framing the context of questions; some respondents had knowledge of one or the other levels of school district organization. We found that nearly half of the facilitators (44%) began working at the building level, while the others (56%) began at the district (Table 1.3.36).

There appear to be distinct differences by role group in the level of initial contact. For example, in 70% of the cases of assistance given by state-administered program developers, the facilitators began working at the building level; whereas in 75% of the cases of assistance given by NDN Title I Developer/Demonstrators, the respondents began at the district level. The other program role groups fall in between these two extremes (see Table 1.3.37).

We also wanted to know how contact with local sites was initiated. We found that the largest number of contacts (35%) were initiated at awareness conferences, although 21% were made by the school district with no awareness conference, and 13% involved facilitator initiation without an awareness conference (Table 1.3.38). When asked who initiated the contact between sites and external facilitators, respondents indicated that, in 63% of the cases, the schools had made the first contact; in 31% of the cases, either the respondent or another external facilitator had initiated the relationship (Table 1.3.39).

BEST COPY AVAILABLE

When contact was initiated by the schools, it was usually made by a program director or coordinator (36.4% of the school-initiated contacts). These district staff, as we have seen, are often local facilitators. Teachers, principals, superintendents, and building specialists (in descending order) also contacted external facilitators regarding new practices (Table 1.3.40).

## Assistance to Local Sites

The list of assistance activities originally developed at the Belmont Conference on Linking Functions was used not only in the external facilitator general questionnaire but also in site-specific interviews, to gather information about the activities of both external and local facilitators with regard to specific sites in the study sample. The following discussion is based on data from the activities list. Table 39 presents the distributions of the two facilitator samples for each item included in the activities list. Local facilitators were not asked to complete the section on initiation of relationships.

In comparing the remaining categories of items for which we have data from both groups, local facilitators score higher on every item with the exception of two: providing detailed information and working with site contact (who, in many cases, is the local facilitator). These are the activities external facilitators spent the most time on, judging from their mean scores.

## Table 39
## External Facilitator and Local Facilitator Assistance to Local School Sites
Data Source: External Agent and Local Site External Agent Site-Specific Interviews

| | Amount of Time Spent on Activity | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACTIVITY | A lot of time = 1 | | Moderate amount = 2 | | A little time = 3 | | Did not perform this activity = 4 | | TOTAL | | Sample Mean | |
| | EF* | LF** | EF | LF | EF | LF | EF | LF | EF | LF | EF | LF |
| A. Initiating Relationships | | | | | | | | | | | | |
| 1. Arranging or participating in conferences | 19<br>15.0% | + | 49<br>38.6% | -- | 31<br>24.4% | -- | 28<br>22.0% | -- | 127<br>100% | -- | 2.54 | -- |
| 2. Distributing general information (e.g., flyers, newsletters) | 10<br>7.8% | -- | 32<br>24.8% | -- | 59<br>45.7% | -- | 28<br>21.7% | -- | 129<br>100% | -- | 2.81 | -- |
| 3. Hosting visits to review materials | 7<br>5.5% | -- | 28<br>21.9% | -- | 28<br>21.9% | -- | 65<br>50.8% | -- | 128<br>100% | -- | 3.18 | -- |
| 4. Holding demonstration visits | 14<br>10.9% | -- | 30<br>23.3% | -- | 20<br>15.5% | -- | 65<br>50.4% | -- | 129<br>100% | -- | 3.05 | -- |
| 5. Contacting new clients by mail, telephone, or in person | 12<br>9.5% | -- | 32<br>25.4% | -- | 46<br>36.5% | -- | 36<br>28.6% | -- | 126<br>100% | -- | 2.84 | -- |
| B. Assisting Clients in Deciding on new Resources | | | | | | | | | | | | |
| 6. Seeking commitment from school administrators | 6<br>4.6% | 10<br>14.9% | 34<br>26.4% | 32<br>47.8% | 45<br>34.9% | 16<br>23.9% | 44<br>34.1% | 9<br>13.4% | 129<br>100% | 67<br>100% | 2.98 | 2.36 |
| 7. Seeking commitment from teachers | 7<br>5.4% | 18<br>26.5% | 31<br>23.8% | 26<br>38.2% | 37<br>28.5% | 14<br>20.6% | 55<br>42.3% | 10<br>14.7% | 130<br>100% | 68<br>100% | 3.08 | 2.24 |
| 8. Seeking support from local school boards | 1<br>.8% | 9<br>13.4% | 5<br>3.9% | 12<br>17.9% | 19<br>14.8% | 23<br>34.3% | 103<br>80.5% | 23<br>34.3% | 128<br>100% | 67<br>100% | 3.75 | 2.90 |
| 9. Preparing a "case" for the decision to adopt | 2<br>1.5% | 13<br>19.4% | 20<br>15.4% | 21<br>31.3% | 27<br>20.8% | 15<br>22.4% | 81<br>62.3% | 18<br>26.9% | 130<br>100% | 67<br>100% | 3.44 | 2.57 |
| 10. Assessing needs | 7<br>5.4% | 29<br>43.3% | 24<br>19.6% | 19<br>28.4% | 28<br>21.7% | 15<br>19.4% | 70<br>54.3% | 5<br>9.0% | 129<br>100% | 67<br>100% | 3.25 | 1.94 |
| 11. Building support among school personnel | 8<br>6.2% | 18<br>26.5% | 18<br>14.0% | 27<br>139.7% | 36<br>27.9% | 15<br>22.1% | 67<br>51.9% | 8<br>11.8% | 129<br>100% | 68<br>100% | 3.26 | 2.19 |
| 12. Making library and computer searches for materials | 0<br>0.0% | 8<br>11.9% | 5<br>4.0% | 8<br>11.9% | 11<br>8.7% | 21<br>31.3% | 110<br>87.3% | 30<br>44.8% | 126<br>100% | 67<br>100% | 3.83 | 3.09 |

*EF = External Facilitator **LF = Local Facilitator
+Local facilitators were not asked to respond to items included in Initiating Relationships.

BEST COPY AVAILABLE

Table 39
External Facilitator and Local Facilitator Assistance to Local School Sites (Continued)
Data Source: External Agent and Local Site External Agent Site-Specific Interviews

| ACTIVITY | Amount of Time Spent on Activity | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A lot of time = 1 | | Moderate amount = 2 | | A little time = 3 | | Did not perform this activity = 4 | | TOTAL | | Sample Mean | |
| | EF* | LF** | EF | LF | EF | LF | EF | LF | EF | LF | EF | LF |
| C. Assisting Clients in Preparing for Adoption | | | | | | | | | | | | |
| 13. Arranging training | 19<br>15.0% | 24<br>36.9% | 48<br>37.8% | 27<br>41.5% | 41<br>32.3% | 8<br>12.3% | 19<br>15.0% | 6<br>9.2% | 127<br>100% | 65<br>100% | 2.47 | 1.94 |
| 14. Training the users | 43<br>33.3% | 21<br>33.3% | 39<br>30.2% | 18<br>28.6% | 10<br>7.8% | 11<br>17.5% | 37<br>28.7% | 13<br>20.6% | 129<br>100% | 63<br>100% | 2.32 | 2.25 |
| 15. Providing detailed information | 38<br>29.2% | 21<br>32.3% | 46<br>35.4% | 19<br>29.2% | 34<br>26.2% | 18<br>27.7% | 12<br>9.2% | 7<br>10.8% | 130<br>100% | 65<br>100% | 2.15 | 2.17 |
| 16. Securing materials or other required resources | 21<br>16.2% | 20<br>31.3% | 32<br>24.6% | 22<br>34.4% | 46<br>35.4% | 18<br>28.1% | 31<br>23.8% | 4<br>6.2% | 130<br>100% | 64<br>100% | 2.67 | 2.09 |
| 17. Working with administrators | 10<br>7.8% | 12<br>18.7% | 49<br>38.3% | 28<br>43.8% | 45<br>35.2% | 19<br>29.7% | 24<br>18.8% | 5<br>7.8% | 128<br>100% | 64<br>100% | 2.65 | 2.27 |
| 18. Working with site contact | 32<br>24.8% | 9<br>14.5% | 48<br>37.2% | 28<br>45.2% | 33<br>25.6% | 13<br>21.0% | 16<br>12.4% | 12<br>19.4% | 129<br>100% | 62<br>100% | 2.26 | 2.45 |
| 19. Allocating financial resources | 4<br>3.2% | 12<br>18.5% | 23<br>18.3% | 16<br>24.6% | 27<br>21.4% | 17<br>26.2% | 72<br>57.1% | 20<br>30.8% | 126<br>100% | 65<br>100% | 3.3 | 2.69 |
| 20. Maintaining support among personnel | 5<br>3.9% | 15<br>24.2% | 20<br>15.6% | 26<br>41.9% | 41<br>32.0% | 16<br>25.8% | 62<br>48.4% | 5<br>8.1% | 128<br>100% | 62<br>100% | 3.25 | 2.18 |
| D. Assisting Clients in Implementation | | | | | | | | | | | | |
| 21. Planning implementation schedules | 7<br>5.4% | 15<br>22.4% | 39<br>30.2% | 22<br>32.8% | 39<br>30.2% | 18<br>26.9% | 44<br>34.1% | 12<br>17.9% | 129<br>100% | 67<br>100% | 2.93 | 2.40 |
| 22. Providing technical assistance or follow-up training | 25<br>19.5% | 11<br>16.4% | 40<br>31.3% | 32<br>47.8% | 35<br>27.3% | 14<br>20.9% | 28<br>21.9% | 10<br>14.9% | 128<br>100% | 67<br>100% | 2.52 | 2.34 |

*EF = External Facilitator **LF = Local Facilitator

BEST COPY AVAILABLE

## Table 39
## External Facilitator and Local Facilitator Assistance to Local School Sites (Continued)

Data Source: External Agent and Local Site External Agent Site-Specific Interviews

| ACTIVITY | Amount of Time Spent on Activity | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A lot of time = 1 | | Moderate amount = 2 | | A little time = 3 | | Did not perform this activity = 4 | | TOTAL | | Sample Mean | |
| | EF* | LF** | EF | LF | EF | LF | EF | LF | EF | LF | EF | LF |
| D. Assisting Clients in Implementation (cont.) | | | | | | | | | | | | |
| 23. Assisting teachers in working out procedural details | 22<br>17.1% | 18<br>26.5% | 25<br>19.4% | 20<br>29.4% | 27<br>20.9% | 20<br>29.4% | 55<br>42.6% | 10<br>14.7% | 129<br>100% | 68<br>100% | 2.89 | 2.32 |
| 24. "Putting out fires" | 8<br>6.3% | 9<br>13.4% | 11<br>8.7% | 24<br>35.8% | 27<br>21.4% | 19<br>28.4% | 80<br>63.5% | 15<br>22.4% | 126<br>100% | 67<br>100% | 3.42 | 2.60 |
| 25. Maintaining support among school personnel | 6<br>4.7% | 10<br>14.9% | 19<br>15.0% | 32<br>47.8% | 44<br>34.6% | 16<br>23.9% | 58<br>45.7% | 9<br>13.4% | 127<br>100% | 67<br>100% | 3.21 | 2.36 |
| E. Follow-Up Activities | | | | | | | | | | | | |
| 26. Collecting impact data | 3<br>2.0% | 11<br>16.4% | 19<br>12.8% | 22<br>32.8% | 47<br>31.8% | 19<br>28.4% | 57<br>38.5% | 15<br>22.4% | 126<br>100% | 67<br>100% | 3.25 | 2.57 |
| 27. Analyzing impact data | 6<br>4.8% | 11<br>16.4% | 15<br>11.9% | 19<br>28.4% | 37<br>29.4% | 16<br>23.9% | 68<br>54.0% | 21<br>31.3% | 126<br>100% | 67<br>100% | 3.33 | 2.70 |
| 28. Assisting local site conduct evaluation of new practice | 3<br>2.3% | 13<br>19.7% | 22<br>17.2% | 25<br>37.9% | 36<br>28.1% | 15<br>22.7% | 67<br>52.3% | 13<br>19.7% | 128<br>100% | 66<br>100% | 3.31 | 2.42 |
| 29. Developing plan to support continuation of new practice | 3<br>2.3% | 16<br>23.9% | 24<br>18.5% | 26<br>38.8% | 39<br>30.0% | 17<br>25.4% | 64<br>49.2% | 8<br>11.9% | 130<br>100% | 67<br>100% | 3.26 | 2.25 |
| 30. Developing additional new users at site | 2<br>1.6% | 8<br>12.1% | 18<br>14.1% | 21<br>31.8% | 16<br>12.5% | 11<br>16.7% | 92<br>71.9% | 26<br>39.4% | 128<br>100% | 66<br>100% | 3.55 | 2.83 |

*EF = External Facilitator **LF = Local Facilitator

BEST COPY AVAILABLE

Local facilitators spent most time on other activities, including assessing needs, arranging training, and securing materials or other required resources. However, they too spent considerable time providing detailed information as well as building and maintaining support among school personnel.

The least performed activity for both groups was making library and computer searches for materials; here again, local facilitators reported spending more time on this activity than did external facilitators. Over half the local facilitators (55%) reported spending at least a little time on this activity, whereas only 13% of the external assisters reported spending any time peforming such a task. It begins to appear that scanning the environment for new ideas, practices, etc. may be an important part of the local facilitator role.

### Factor Analysis of Assistance Items

We wanted to understand whether these five categories of assistance reflected the way these activities would be organized empirically; so the items in the external facilitator activities list were factor-analyzed for commonalities. The resulting factors correspond quite closely to the five logically-grouped categories, but the assistance sequence is further broken down into seven components. Table 40 displays the seven empirically-derived activity clusters.

The original solution produced eight factors. Administrator adoption preparation, teacher adoption preparation, evaluation, and continuation/diffusion emerged clearly. A fifth factor was divided into two parts, producing support of teachers and implementation specifics; the items contained in the former loaded very highly on the original factor, while the items in the latter loaded somewhat more moderately as can be seen from Table 40.

Two additional factors from the original eight were combined to create awareness and initiation; this explains the low loadings in that factor as reported in Table 40. The loadings for "hosting visits to review materials" and "holding demonstration visits" as a separate factor were .59 and .73, respectively.

The eighth factor in the original solution consisted of a motley collection of items. "Allocating financial resources" had the highest loading and was in fact used alone in our causal analyses (to be parallel with local site data). Here we group it with administrator adoption preparation. Thus the eight-factor solution becomes seven factors. Each had an Eigenvalue of 1 or more.

Four assistance items were outliers: they did not belong naturally to any one of the factors. The mavericks included "making library and computer searches for materials," "working with site contact," "fighting fires," and "assessing needs." The first was the least often performed activity (see Table 39); it

## Table 40
## External Facilitator Assistance Factors
## Data Source: External Agent Site-Specific Interview

| | Factor Loading |
|---|---|
| **Awareness and Initiation:** | |
| arranging or participating in awareness conferences | .67 |
| distributing general information (e.g., flyers, newsletters) | .74 |
| hosting visits to review materials | .15 |
| holding demonstration visits | .27 |
| contacting new clients by mail, telephone, or in-person | .70 |
| **Administrator Adoption Preparation:** | |
| seeking commitment from school administrators | .71 |
| seeking support from local school boards | .65 |
| preparing a "case" for the decision to adopt | .55 |
| working with administrators | .24 |
| allocating financial resources | .14 |
| **Support of Teachers:** | |
| seeking commitment from school teachers | .60 |
| building support among school personnel | .72 |
| maintaining support among school personnel | .69 |
| (two identical items) | .79 |
| **Teacher Adoption Preparation:** | |
| arranging training | .38 |
| training the users | .83 |
| providing detailed information | .66 |
| securing materials or other required resources | .47 |
| **Implementation Specifics:** | |
| planning implementation schedules | .55 |
| providing technical assistance or follow-up training | .49 |
| assisting teachers in working out procedural details | .51 |
| **Evaluation:** | |
| collecting impact data | .82 |
| analyzing impact data | .94 |
| assisting local site conduct evaluation of new practice | .58 |
| **Continuation/Diffusion:** | |
| developing plan to support continuation | .49 |
| developing additional new users at site. | .50 |

and the next two items did not load clearly on any one of the factors. "Assessing needs" loaded quite strongly with the support of teachers factor but was treated separately in the causal analyses.

We should explain that two items concerning materials were broken out of teacher adoption preparation for the path analyses reported in Volume III, again to be parallel with local site data. The addition of materials, along with allocating financial resources (money), means that nine factors will be discussed in the text that follows.

On which activity clusters did external and local facilitators spend most time? To answer that question, we computed the mean assistance scores for all the sites with external facilitators and all the sites with local facilitators. Each mean was then adjusted according to the number of items in the factor so they would be comparable. (Within each site, assistance scores of more than one external facilitator or more than one local facilitator were averaged. Thus NDN SF and D/D data are merged in this analysis.) Table 41 presents the adjusted sample means for each factor for both external and local facilitators. (Notice that the items were recoded from the original activities list so that 3 = a lot of time; 2 = a moderate amount of time; 1 = a little time; and 0 = did not perform this activity.) Once again, local facilitators spent more time on every aspect of assistance except teacher adoption preparation. External facilitators spent most time on that factor, while local facilitators spent most time on materials. The least performed activity clusters for both were evaluation, continuation/diffusion, and allocating money.

Table 42 breaks down the totals for all external facilitator assistance to sites by program, where interesting differences become apparent. The external facilitators from the NDN non-Title I, NDN Title I, and state-administered programs spent most time on teacher adoption preparation, but Title IV-C locally developed project facilitators spent most of their time on materials.

A few other intriguing points: state-administered program respondents spent considerably more time than any other group on support of teacher activities and somewhat more on continuation/diffusion. NDN Title I facilitators spent the least amount of time of any group on continuation/diffusion and on implementation specifics. Title IV-C consultants performed considerably more evaluation work than any other role group and somewhat more time allocating money; they spent somewhat less time on teacher adoption preparation than the others. The NDN respondents spent the most time of all on teacher adoption preparation.

## Table 41
## Amount of Assistance Provided by External and Local Facilitators
Data Sources: External Agent and Local Site External Agent Site-Specific Interviews
Adjusted Sample Means

| | Initiating Awareness | Support of Teachers | Administrator Adoption Preparation | Teacher Adoption Preparation | Materials | Implementation Specifics | Evaluation | Continuation/ Diffusion | Allocating Money | N of Sites |
|---|---|---|---|---|---|---|---|---|---|---|
| All external facilitators | 1.10 | .83 | .78 | 1.72 | 1.61 | 1.30 | .75 | .62 | .60 | 97 |
| All local facilitators | --* | 1.72 | 1.58 | 1.69 | 1.83 | 1.58 | 1.43 | 1.43 | 1.31 | 64 |

Scale: 0 = did not perform this activity
1 = a little time
2 = a moderate amount of time
3 = a lot of time

*Local facilitators were not asked to respond to items included in Initiating Awareness.

## Table 42
## External Facilitator Assistance to Local Sites by Program
Data Source: External Facilitator Site-Specific Interviews
Adjusted Sample Means

| | Initiating Awareness | Support of Teachers | Administrator Adoption Preparation | Teacher Adoption Preparation | Materials | Implementation Specifics | Evaluation | Continuation/ Diffusion | Allocating Money | N of Sites |
|---|---|---|---|---|---|---|---|---|---|---|
| NDN non-Title I | .94 | .69 | .70 | 1.87 | 1.68 | 1.31 | .62 | .62 | .64 | 44 |
| NDN Title I | 1.36 | .73 | .79 | 1.52 | 1.43 | .99 | .67 | .46 | .53 | 24 |
| State-administered programs | 1.37 | 1.40 | .93 | 1.79 | 1.58 | 1.51 | .86 | .74 | .62 | 21 |
| Title IV-C locally developed projects | .46 | .38 | .84 | 1.29 | 1.82 | 1.56 | 1.44 | .60 | .75 | 8 |

Scale: 0 = did not perform this activity
1 = a little time
2 = a moderate amount of time
3 = a lot of time

BEST COPY AVAILABLE

## Configurations of Assistance

Once we had examined separately the assistance given by external facilitators and local facilitators, we began to wonder about the configuration of roles and patterns of assistance. To begin with, we wanted to understand how external facilitators and local facilitators were distributed among the sites. Of the 146 sites, only 17 had identified neither external facilitators nor local facilitators, and 14 of these were BEH. Of the local sites, 50 had both types of assisters present; 62 had only external helpers, and 14 had only internal assisters -- 12 of these were Title IV-C locally developed sites. Table 43 presents these data.

The table also displays the configurations of assistance by program, and here is where differences begin to appear. NDN non-Title I sites are just about evenly divided between those having both external and local facilitators and those having only external facilitators. NDN Title I sites also are split between the two categories, although the breakdown is more 60/40 than 50/50, with a tilt toward the external/local configuration. The dramatic difference is in state-administered programs, where only 5 sites out of 30 had local facilitators identified! Apparently the external facilitators for these programs largely work alone. Yet another pattern emerges from the Title IV-C locally developed project sites, where half had local facilitators and no external facilitators.

Next, we compared external facilitator assistance given to sites with external and local facilitators present, to sites with only external facilitators identified. Table 44 presents these data, including totals by program.

On the average, external facilitators gave less assistance to those sites where there was a local facilitator present than to those sites where no internal helper was identified: only for three of nine factors (evaluation, continuation/diffusion, and allocating money) were the means higher when local facilitators were present. In the cases of support of teachers and implementation specifics, the means are dramatically lower, suggesting that local facilitators may concentrate on these tasks when they are present. As we shall see in a moment, this may not be true for support of teachers. These patterns hold when the sites are categorized by program, as Table 44 makes clear.

Not incidentally, the data suggest that (with the exception of NDN Title I) external facilitators spend less time on awareness/initiation activities when there is a local facilitator present on a site than when there is not. This may have to do with local facilitators (who are often program coordinators or directors) initiating contact, which we discussed on p. 74 (see Tables 1.3.39 and 1.3.40).

## Table 43
## Configurations of Identified External and Local Facilitators by Program*
Data Sources: External Agent and Local Site External Agent Records

| | Both external and local facilitators | Only external facilitator | Only local facilitator | Neither | | Total |
|---|---|---|---|---|---|---|
| NDN non-Title I | 23 | 25 | 0 | 0 | = | 48 |
| State-administered programs | 5 | 25 | 0 | 0 | = | 30 |
| NDN Title I | 16 | 10 | 0 | 0 | = | 26 |
| Title IV-C locally developed projects | 9 | 1 | 11 | 3 | = | 24 |
| BEH | 0 | 1 | 2 | 14 | = | 17 |
| N of sites = | 53 | 62 | 13 | 17 | = | 145** |

*These include all facilitators identified, whether or not interviewed.

**The total number of sites in the study is 146. It proved impossible to verify the presence of either external or local facilitators in one state-administered program site.

# Table 44
## Comparison of Amounts of External Assistance Given to Sites Having Only External Facilitators with Sites Having Both External and Local Facilitators Present

Data Source: External Agent Site-Specific Interview
Adjusted Sample Means

|  | Initiating Awareness | Support of Teachers | Administrator Adoption Preparation | Teacher Adoption Preparation | Materials | Implementation Specifics | Evaluation | Continuation/ Diffusion | Allocating Money | N of Sites |
|---|---|---|---|---|---|---|---|---|---|---|
| All sites with external facilitators | 1.10 | .83 | .78 | 1.72 | 1.61 | 1.30 | .75 | .62 | .60 | 97* |
| Sites with external facilitator only | 1.19 | 1.02 | .80 | 1.76 | 1.67 | 1.46 | .73 | .58 | .58 | 49 |
| Sites with both external and local facilitators | 1.01 | .66 | .79 | 1.68 | 1.54 | 1.14 | .81 | .61 | .64 | 46 |
| NDN non-Title I sites with external only | .95 | .84 | .68 | 1.83 | 1.69 | 1.43 | .69 | .58 | .54 | 23 |
| NDN non-Title I sites with both external/ local | .91 | .56 | .75 | 1.89 | 1.65 | 1.17 | .57 | .63 | .73 | 20 |
| NDN Title I sites with external only | 1.36 | .85 | .81 | 1.33 | 1.32 | 1.13 | .63 | .38 | .50 | 8 |
| NDN Title I sites with both external/ local | 1.41 | .70 | .80 | 1.67 | 1.50 | .96 | .74 | .47 | .53 | 15 |

## Table 44 (continued)

### Comparison of Amounts of External Assistance Given to Sites Having Only External Facilitators with Sites Having Both External and Local Facilitators Present

Data Source: External Agent Site-Specific Interview

Adjusted Sample Means

| | Initiating Awareness | Support of Teachers | Administrator Adoption Preparation | Teacher Adoption Preparation | Materials | Implementation Specifics | Evaluation | Continuation/ Diffusion | Allocating Money | N of Sites |
|---|---|---|---|---|---|---|---|---|---|---|
| State-administered program sites with external only | 1.43 | 1.40 | .92 | 1.84 | 1.72 | 1.59 | .88 | .68 | .53 | 17 |
| State-administered with both external/local | 1.10 | 1.38 | .95 | 1.58 | 1.00 | 1.17 | .75 | 1.00 | 1.0 | 4 |
| Title IV-C locally developed project sites with only external | 1.00 | 0 | 1.20 | 2.33 | 3.00 | 2.33 | 0 | .50 | 3.00 | 1 |
| Title IV-C locally developed project sites with both external/local | .39 | .43 | .79 | 1.14 | 1.64 | 1.45 | 1.64 | .61 | .43 | 7 |

*2 sites with external facilitators are included here, but not in the other calculations.

Scale: 0 = did not perform this activity
1 = a little time
2 = a moderate amount of time
3 = a lot of time

A glance at Table 45 shows that local facilitators exhibit a different pattern: on average, they spend *more* time on *teacher adoption preparation*, *materials*, and *implementation specifics*, and *continuation/diffusion* activities when external facilitators are present than when they work without outside help. Perhaps an external presence acts as a motivator for a local facilitator attempting change. A caveat about the comparisons made on the basis of Table 45: the only sites for which we had only local facilitators identified were Title IV-C locally developed projects; so in a sense, a strict contrast should be made between Title IV-C sites with only a local facilitator, and those with both local and external. That comparison does not dramatically alter the conclusions drawn from the larger contrast.

## Table 45

## Comparison of Amounts of Local Assistance Given to Sites Having Only External Facilitators with Sites Having Both Local and External Facilitators

Data Source: Local Facilitator Site-Specific Interview

Adjusted Sample Means

| | Initiating Awareness* | Support of Teachers | Administrator Adoption Preparation | Teacher Adoption Preparation | Materials | Implementation Specifics | Evaluation | Continuation/ Diffusion | Allocating Money | N of Sites |
|---|---|---|---|---|---|---|---|---|---|---|
| Sites with local facilitators only (Title IV-C sites) | -- | 2.07 | 1.65 | 1.38 | 1.64 | 1.29 | 1.44 | 1.34 | 1.29 | 10 |
| Sites with both local and external facilitators | -- | 1.70 | 1.58 | 1.76 | 1.87 | 1.69 | 1.41 | 1.45 | 1.28 | 46 |
| Sites with both external and local facilitators | | | | | | | | | | |
| NDN non-Title I | -- | 1.63 | 1.56 | 1.49 | 1.61 | 1.49 | .91 | 1.37 | 1.05 | 20 |
| NDN Title I | -- | 1.75 | 1.69 | 2.10 | 2.15 | 1.84 | 1.76 | 1.47 | 1.35 | 15 |
| State-administered programs | -- | 1.75 | 1.15 | 2.00 | 1.75 | 2.00 | 2.00 | 1.88 | 1.50 | 4 |
| Title IV-C locally developed projects | -- | 1.75 | 1.66 | 1.67 | 2.07 | 1.81 | 1.43 | 1.43 | 1.71 | 7 |

*Local facilitators were not asked to respond to items included in Initiating Awareness.

Scale: 0 = did not perform this activity
1 = a little time
2 = a moderate amount of time
3 = a lot of time

We were unable to perform detailed analyses of the impact of different configurations of external and local assistance on local site outcomes, but one preliminary calculation is suggestive. We averaged the scores for teacher change in practice by site, then computed the means for each assistance configuration (both external and local facilitators present, only external, etc.) by program. Table 46 displays the results. Title IV-C locally developed projects had the highest overall mean and BEH the lowest. But what is striking is that the mean score for NDN non-Title I sites with both external and local facilitators present is more than twice as high as that of sites with only an external facilitator present; for NDN Title I sites, the increase is dramatic, but not twice as high. In all cases where we have data, the scores for sites with an external/local pair are higher than those with only an external facilitator -- with one exception: the sites of state-administered program developers, who, as we have seen tend to work alone and to begin at the building level, have slightly higher scores in the category of external facilitator only.

The mean score for BEH sites with neither external nor local facilitators present suggests that sites that do attempt to use BEH products do well without assistance. This finding is balanced by our discovery that few BEH sites ever got to the point of trying the new practices in the first place.

In looking at these figures, remember that the size of the teacher change in practice score is proportionate to the amount of required change: Title IV-C, state-administered programs, and NDN Title I practices tended to require more change than many NDN non-Title I innovations.

## Table 46
## Teacher Change in Practice (by site) by External/Local Facilitator Configuration
Data Sources: User Interview, External Agent and Local Site External Agent Records

| | Both external and local facilitators<br>Mean N | Only external facilitator<br>Mean N | Only local facilitator<br>Mean N | Neither<br>Mean N | = | Totals<br>Mean N |
|---|---|---|---|---|---|---|
| BEH | -- | 1.00 ( 1) | 0 ( 2) | .94 ( 8) | = | .78 ( 11) |
| NDN (total) | 1.35 (37) | .91 (34) | -- | -- | = | 1.15 ( 71) |
| Non-Title I | .90 (22) | .43 (25) | -- | -- | = | .65 ( 47) |
| Title I | 1.80 (15) | 1.38 ( 9) | -- | -- | = | 1.64 ( 24) |
| State-administered programs | 1.50 ( 3) | 1.57 (23) | -- | -- | = | 1.56 ( 26) |
| Title IV-C locally developed projects | 1.74 ( 8) | 1.68 ( 1) | 1.97 (10) | 1.27 ( 3) | = | 1.78 ( 22) |
| Totals | 1.36 (48) | 1.05 (59) | 1.64 (12) | 1.03 (11) | = | 1.22 (130) |

Scale: -3 = low change in practice
+3 = high change in practice

## Summary

In this section we have presented data about external and local facilitator assistance to, and perceptions of, local sites in our study. In addition, other dimensions of interest concerning external facilitators have been discussed: program affiliation, personal characteristics, working setting, role parameters, strategic orientation, and general role performance. (Personal characteristics and other data about local facilitators as administrators are presented in Section 2). The impact of selected subset of these variables on various outcomes of implementation is described in more detail in Volume III.

Almost all the external facilitators in our sample either were funded directly by a program we were studying (the NDN State Facilitators and Developer/Demonstrators, and the state-administered program developers), or they worked with sites funded as Title IV-C locally developed projects. A few others from intermediate units assisted NDN or state-administered program sites and are grouped with the facilitators of those programs.

Two-thirds of the external assister group held at least one other role in addition to their facilitator job; almost all felt that the rewards of multiple roles -- e.g., diversity and variety -- outweighed such problems as role overload. As a whole the sample had considerable job autonomy and had occupied their positions close to five years.

External facilitators were housed in local school districts, intermediate units, private firms, state education agencies, and colleges or universities (in descending order of frequency). One of the features of work setting identified by respondents concerned access to others, particularly potential clients: some settings facilitated access, others hindered it. Respondents came from twenty different states and served areas ranging from part of a single county to the whole nation.

On average, external facilitators spent half their work time with clients; the other half of their time was spent on routine tasks -- administration, professional development, travel, and in-house materials development.

In looking back at the data we have reported for external and local facilitators, their sheer presence in local sites attempting change is striking: of 146 local schools in the study sample, only 17 did not nominate either an external or a local facilitator, and 14 of those sites were BEH program settings.

Assistance given by external and local facilitators formed seven clusters of activity: initiation/awareness; support of teachers administrator adoption preparation; teacher adoption preparation; implementation specifics; evaluation; and continuation/diffusion. The external and local facilitators performed many of the same assistance tasks, but it appears that the local facilitators spent more time on nearly every aspect of a change effort except providing detailed information and working with the site contact (who usually was the local facilitator). In fact, external facilitators appear to have spent less time on most activity clusters when they worked with sites where there was a local facilitator as well. Yet for the NDN sites we studied, the user's change in practice scores were much higher for sites having both external and local assistance than for sites having only external facilitator help. State-administered program developers, on the other hand, tended to work alone, and yet had high change scores. But they seem to have entered at the building level and perhaps therefore bypassed the complementary district role. Title IV-C locally developed sites had yet another pattern: although there were several sites with both external and local facilitators, most of these sites had local facilitators only. They, too, had high change scores. Clearly there are several configurations of assistance possible.

Our external and local facilitator respondents were examples of highly educated, experienced, and professionally active educators. Many of the external facilitators had been administrators or teachers in their previous jobs, and all but 16 had performed at least one facilitator function, such as developing curriculum, training teachers, and disseminating information in their prior positions. It is therefore tempting to speculate that they could have been identified as local facilitators in their previous roles. In fact, the data suggest that the external facilitator role is an attractive one for educators seeking a move -- a new challenge -- after some years of school-based experience. As external facilitators frequently noted in describing job satisfaction, "It's a chance to make a contribution to education." Without the federal and state programs that sponsor such roles, many talented practitioners might be lost to the field of education altogether. Moreover, as school districts trim central office personnel to reduce budgets, the local facilitator role is in danger of being cut back as well. Yet, as we reveal in Volume III, the complementary contributions of these two groups of assistance providers may make the difference between going through the motions of change and real shifts in individual and organizational practice in local schools.

# CHAPTER II: LOCAL SCHOOLS -- THE BACKDROP FOR IMPROVEMENT

The context within which a school improvement effort is staged has much to do with its ultimate success -- or failure. How receptive are the people? How much support or opposition exists? Are the people and material resources available, and are they brought to bear in ways which affect the implementation of the new practice?

These are some of the questions we needed to answer in order to understand the settings where our new practices were being implemented. This section describes those settings through their:

- demographic characteristics,
- school climate,
- support and opposition for the new practices, and
- prior experience with school improvement efforts.

## Demographic Characteristics

There are many demographic characteristics that are thought to influence, or predict, the success of school improvement efforts. As noted in the sampling section in Volume I, we attempted to select a wide variety of local sites which would be distributed across many of these characteristics. In this section, we discuss selected demographic variables, describing what the environments were like for the teachers and administrators in our sample.

The size of districts in our sample ranged widely, from 63 to over 128,000 students, with a mean of 8,211. Because district size was found to influence the outcomes of school improvement (see Volume III), we include Table 47 to report the size distribution.

Table 47
Distribution of District Size
(Number of Students) in the Sample
Data Source: Local Site Demographic Fact Sheet

| | Number of responses | Percent |
|---|---|---|
| 1 - 1,000 | 27 | 19.8% |
| 1,001 - 2,000 | 28 | 20.1 |
| 2,001 - 4,000 | 22 | 16.2 |
| 4,001 - 8,000 | 23 | 16.9 |
| 8,001 - 16,000 | 15 | 11.0 |
| 16,001 - 32,000 | 15 | 11.0 |
| Over 32,000 | 6 | 4.4 |
| N = | 136 Sites | 100.0% |

Mean = 8,211
S.D. = 16,149

As we noted in Volume I, when we contrasted our district sizes with information from the 1981 Digest of Educational Statistics (Fall 1979 data), we found that our districts are larger than those across the US. Fifty-three percent of US districts have fewer than 1,000 students; only 20% of our districts were that small. At the other end, our districts are also larger. Only 1% of US districts have over 25,000 students; over 4% of ours had over 32,000 enrolled. Thus, our sample can be said to be somewhat larger than a cross-section of U.S. schools, but not so much so that we would feel uncomfortable generalizing our findings.

School size ranged from 18 to 3,092 students, with a mean of 676 students. Again, because school size resulted in an impact on school improvement outcomes, we use Table 48 to report the distribution in the sample.

Table 48
Distribution of School Size
(Number of Students) in the Sample
Data Source: Demographic Fact Sheet

| | Number of responses | Percent |
|---|---|---|
| 1 - 150 | 11 | 7.7% |
| 151 - 300 | 34 | 23.9 |
| 301 - 450 | 31 | 21.8 |
| 451 - 600 | 21 | 14.8 |
| 601 - 750 | 11 | 7.7 |
| Over 750 | 34 | 23.9 |
| N = | 142 Sites | 100.0% |

Mean = 676
S.D. = 967

Although we were unable to find national data reporting size of schools, our experience tells us that we have a fairly representative sample of school sizes. Almost half (45%) have between 51 and 450 students, the size of a typical suburban or rural regional elementary school. We do, however, have a sizeable number of large schools (24% have over 750 students), which gives us a bimodal distribution. The latter are mainly high schools, many drawing from a widespread rural population.

Schools in our sample ranged in grade level as well. Over half (57%) were elementary, 26% senior high, 13% middle or junior high, and 5% had another designation (e.g., a combination of levels).

As to geographic distribution, 38% of our schools were in the East, 46% in the Midwest, and 16% in the West. We classified 12% of our sites as urban, 36% as suburban, and 54% as rural. As noted in Volume I, national data from the 1980 census indicate that we have more rural sites (53% of our sample versus 25% of the communities in the U.S.), and fewer urban sites (our 12% versus US 30%) than would a sample of schools truly representative of the country's communities. Our conjecture is that schools they are more like ours in character are apt to be more active in school improvement. Urban schools often either have their own resources to muster an effort, and so do not need the federal or state monies; or they have so many "big city" problems to handle that they have relatively little time for focusing on systematic improvement projects. Thus, we have fewer urban sites. At the other end, schools in rural areas may find it necessary to get outside support for improvement, and once the "source has been tapped" may find it less of a problem (than do urban schools) to mount and maintain an improvement effort.

Although, according to design, the demographic characteristics of our schools ranged widely, it is possible to describe a "typical" school in our sample. It would be a 400-student elementary school in a rural midwestern community, whose school district served about 3000 students. Since there is no actual "typical" school, it is worth keeping in mind that our sample ranged from a one-room schoolhouse to a large urban high school.

## School Climate

The climate of the school is believed by many to be a critical factor in the success of improvement efforts. In the study, we were interested in several aspects of school climate. We defined and assessed eight variables to allow us to explore these aspects, which are:

- Within-building rapport -- How cohesive is the teaching staff? Do they relate well to one another, or are there cliques or conflicts? We used two variables to assess this:

  1. school cohesiveness

  2. staff rapport

- Cross-level rapport -- How do teachers relate to individuals at other levels, (e.g., principal, central office personnel)? How much influence do teachers have in areas that affect their teaching roles; (i.e., how responsive are decisions-makers to those who must carry out their decisions)? We used two variables to assess this:

  1. principal management style

  2. decision-maker responsiveness

- Teacher autonomy -- How much freedom do teachers have to make decisions about what goes on in their classrooms? How much discretion do they feel they have over the choice of curricula and instructional strategies? We used one variable to assess this:

    1. teacher autonomy

- Internal mechanisms for improvement -- This dimension looks at some of the structures within the school that may contribute to improvement efforts. Does the principal provide proactive leadership? When problems arise, are there procedures to solve them that involve the most appropriate people? We used two variables to assess this dimension:

    1. principal leadership
    2. problem-solving effectiveness

To assess these aspects of school climate, we thought it most appropriate to survey the entire school staff -- not just those who were "users" of the practices we were focusing on. Otherwise, we would not have a clear picture of the social context within which our users functioned. We assessed climate using the Building Work Climate Questionnaire, administered to all staff within each sample school. A total of 138 school staffs, comprising 3,129 individuals, turned in questionnaires.

### Within-Building Rapport

If school improvement is in any sense an organizational phenomenon, and we believe it is, how well staff members relate to each other may be relevant to implementation and institutionalization of new practices. In schools where conflict exists within the staff, where individuals are isolated, and where cliques influence norms and values, the extra energy and commitment vital to improvement of instruction may be diverted or lacking altogether. Thus we believed it important to understand the role of internal staff rapport.

When teachers were asked to depict the presence or lack of cohesiveness in their schools, they generally perceived their schools as cohesive, or at least as having distinct groups within the staff. Teachers in a large majority of schools (65%) reported that there was one major group; almost a quarter (24%) of the schools were described as having several small groups. Few teachers characterized their schools as made up of isolated individuals (Table 2.1).

We also asked building administrators about their schools' cohesiveness.[19] They tended to respond in the same general categories as teachers, with 43% seeing the school as one cohesive unit, and 36% describing teachers as being in several small groups. However, it is interesting to note the differences, between administrators and staff. Principals were more likely than teachers to see the staff as members of small groups rather than of one tightly-knit group. This may be the result of their administrative "eyeglasses," through which they see teachers in grade levels, or in primary and intermediate areas, or in departments. Teachers, on the other hand, may feel close to "other teachers" in general, although their day-to-day experience is on their own rather than in groups. As we note later, teachers reported that they rarely got help with new practices from department chairs, team leaders, or other "subgroup" leaders; they seem to recognize and have allegiance to the school as a whole rather than any particular subgroups. Neither administrators nor teachers, however, depicted their schools as organizations of "isolates."

We defined staff rapport as the amount of cooperation and the tolerance for differing opinions among the staff. Half of the teachers in our sample (51%) reported a high degree of rapport within the staff, indicated by a score of 4 or 5 on a 5-point scale; another 41% of the teachers scored a 3 on the scale, indicating a moderate degree of rapport (Table 2.2). Combining this with the cohesiveness data, a picture of relatively harmonious relationships emerges. Most school staffs have a sense of "togetherness", either as a whole staff or at least with small groups within the building. Tolerance of differing ideas is the norm, with openness to dissenting opinions. Staff members cooperate with each other.

### Cross-Level Rapport

Regardless of how openly teachers behave among themselves, it is also important to school improvement that they have rapport with personnel at other levels. We wanted to explore how teachers related to others in decision-making roles, and how responsive they felt these decision-makers actually were to the needs of the teachers themselves.

As noted in the description of building administrators in Chapter I, teachers in our sample described their principals as having a fairly interactive and responsive management style. He or she typically solicited their opinions, rewarded initiative, and provided constructive feedback (see Table 22).

---

[19] The principal's assessment of cohesiveness is included in the school-level causal model, discussed in Volume III and labelled "staff cohesiveness."

We also were interested in how responsive teachers perceived people to be who were in role groups in addition to that of principal, such as school board, superintendent, central office staff, and parents. Not unexpectedly, teachers reported that their peers were most responsive to their concerns (96% said "moderately" to "very" responsive); their principal came in a close second (91% giving either of those responses). The superintendent, school board, and central office staff were seen as only somewhat responsive (58%, 74%, and 64%, respectively, said "somewhat" responsive) (Table 2.3).

Thus we see a situation where rapport is clearly stronger among teachers than with other role groups. Our sample did perceive a closeness to their principals, but the amount of responsiveness of other educators to teachers' concerns decreased as their distance from the classroom and the school increased.

### Teacher Autonomy

It is often proposed that use of new practices introduced from outside a teacher's classroom decreases the teacher's autonomy. Because our sample was generally involved in innovation adoption and implementation, rather than development of their own new practices (even in Title IV-C sites, development was often done by others than the teacher), we wanted to explore how much autonomy staff perceived they had. We asked our teachers whether they had the freedom to deviate from prescribed curricula and to do their work in the way they thought best. When we totaled their responses, 88% of the respondents scored a 5 or higher on a 7 point scale. This indicates a moderately high degree of autonomy. Teachers felt they could adapt what they were doing in their classrooms without fear of sanction or punishment. This is an interestingly different picture than those often painted of programs introduced from outside, when teachers felt their freedom to modify was curtailed (Table 2.4).

### Internal Mechanisms for Improvement

School improvement is claimed to be more successful when organizational structures and roles exist to support proactive, organized planning, problem-solving and decision-making. So say many specialists in organization development and planned change. (Schmuck & Miles, 1971). Others have added that the school principal's role in such efforts is a critical factor for success (Leithwood & Montgomery, 1982). We wanted to explore how school staffs in our sample perceived their schools in these areas.

Our assessment of principal leadership is reported earlier in Chapter I (p. 38). Asked the extent to which the principal set priorities and expectations, and planned and carried out his or her plans for the school, staff described a moderate degree of leadership on the part of the principal. Fewer than 20% felt their principal did not provide leadership; however, it should also be noted how few staff (6%) rated their principal as a particularly strong leader (see Table 20).

To assess the variable, problem solving effectiveness, we asked teachers to what extent school problems were handled and decisions made in a routine, orderly fashion, with outcomes and expectations clarified, and whether the appropriate people were called upon to participate. Most respondents agreed that mechanisms were in place for solving problems with 64% scoring a 4 or 5 on a 5-point scale. Another 33% scored a 3, which we can interpret to mean that at times, problem-solving was somewhat rough or difficult (Table 2.5).

## Summary

Our school climate data add to our picture of the settings within which improvement efforts took place. We found a positive climate, with scores on our climate dimensions not extremely high, but clearly in the medium to high range. There was cohesiveness and rapport among the school staff and between staff and individuals at other levels. School staffs perceived that their schools were being run and decisions were being made in an orderly, appropriate fashion, by the most appropriate people. Furthermore, teachers believed they had some influence over what happened in the school as an organization, and in particular, that their principals listened to them and were responsive to their needs. Teachers also claimed that they had a significant amount of influence over the learning of their students.[20]

## Support for Practice

Another important aspect of school improvement efforts is the extent of nurturing and support provided to users of a new practice by individuals and groups in the local setting, either at the school, district, or community level. We reasoned that the more that such support existed, the more successful the change effort. Likewise, we proposed that opposition by significant individuals and groups might have a deleterious effect on implementation.

---

[20] Here again, we have found very positive responses to questions that may have a high degree of social desirability. Although we recognize the problem with this kind of self-report data, it is also important to note that the Building Work Climate Questionnaires were anonymous, and we took great pains to establish procedures for collecting them so that the anonymity would be assured. We note here, too, that the questionnaire responses were not quite as positive as the data collected in interviews, where anonymity could hardly be guaranteed. This allows us to be optimistic about the soundness of the data.

We assessed support in a variety of ways: by measuring the amount of assistance given users by various role groups, by the existence of an advocate of the practice, and by the sources of endorsement reported directly by both teachers and administrators.[21] We assessed sources of opposition by querying administrators. We now discuss the results of these assessments.

The most tangible support we assessed was the assistance provided to teachers by various individuals and groups. In the previous section discussing the roles and contributions of administrators, we noted building and district-level administrator assistance. Here we complete the picture of assistance at the local school level by reporting that the help provided to users by other teachers in general, and by "teacher leaders" such as department chairpersons, team leaders, grade level coordinators, was significant, although it was not frequent. Eighty-four percent of the respondents said that they got assistance from fellow teachers "sometimes;" 64% said teacher leaders provided assistance "sometimes." This give us a picture of teachers who were neither dependent upon these others, nor were they isolated or independent from them. However, it is notable that 26% of the respondents received no assistance from teacher leaders; this might also indicate that there was no such role group in these particular schools (Table 2.6).

Support also appeared in the form of an innovation advocate. We asked four different role groups whether there was someone in the district who had been active in getting the new practice in place. A large majority of our respondents answered "yes": 86% of the users, 88% of the administrators, 79% of the local facilitators, and 90% of the external facilitators. Over 21% of the local facilitators responded "don't know," which is somewhat puzzling, since in many cases they were the advocates. Perhaps the item wording was confusing, or these people did not want to take credit for their own advocacy. Data from the local and external facilitators indicate that most often the advocate was a program director or assistant superintendent (noted by 26% of local and 32% of external facilitators responding), a principal or assistant principal (noted by 20% and 22%, local and external facilitator responses), or teacher (noted by 19% of each). Superintendents, and building and district level specialists were mentioned, but less frequently. Thus it appears that the motivating force most often came from the building level, or from a district level person who was primarily responsible for introducing and "directing" a special project (Tables 2.7 - 2.8).

---

[21] In this section, our teacher data comes from User Interviews and User Questionnaires, and our administrator data comes only from implementing administrators. This is because the variables are practice-related. The Building Work Climate Questionnaire, given to whole school staffs, asked no questions about the specific practice whose use we were examining; this was because the practices were rarely being used by everyone in the school.

What did these people do? The list sounds much like the support behaviors of administrators and local facilitators which were discussed earlier. External facilitators reported that the advocate helped acquire and set up the program (mentioned by 56% of the respondents), used his or her influence to leverage staff (39% mentioned), provided general support (31%), and communicated with staff (26%). Local facilitators most often mentioned the advocate's role in communicating with staff (48% mentioned), helping set up the program (45%), and providing general support (41%). Activities mentioned less often, but nonetheless important, were planning, scheduling, organizing, external communication, handling paperwork, and writing proposals. Indeed, these appear to be busy people (Tables 2.9).

Advocates provide internal support for a new practice. We also were interested in sources of endorsement for the improvement effort, presumably from the outside. When asked, nearly half of the teachers indicated that no individual or group endorsed the practice. The other half perceived endorsement to come most often from parents and community groups (mentioned by 31% of all respondents). They also reported endorsement from those closest to them in the school, people most likely to also be involved in the effort, such as other teachers (mentioned by 20%) and administrators (mentioned by 19%).

The form of the endorsement received was frequently intangible, reported as general support (23%), and positive feedback, (by 25%). Put together with the various sources of support noted by teachers, this seems to describe for many teachers a nurturing, supportive environment where people "in charge" understand the problems of change and are encouraging and facilitating (Tables 2.10 - 2.12).

Administrators described a wide range of support that was given for the school improvement effort. Again, many (69% of those responding) mentioned that this support consisted of positive feedback. Other kinds of support were somewhat more tangible. Individuals or groups assisted by planning with school staff and participating with them in innovation-related activities such as training (mentioned by 53% of administrators responding). Help also was given in the form of external communication (33% mentioned), such as that with parents and the community (Tables 2.13 and 2.14).

External and local facilitators also described support given to the improvement efforts by the school system. In addition to general support (mentioned by 34% of the external facilitators and 45% of the local facilitators), they listed staff and released time (27% and 23%, respectively), materials (21% and 23%), consent (21% and 23%), and funds (20% and 23%), as more tangible forms of support. Here we are getting at some very specific forms of support, which help us understand the many requirements for launching a school improvement effort, and the many sources from which those requirements may possibly be filled (Table 2.15).

We did not want to learn only about the facilitative and supporting role the environment played in our sites' school improvement efforts. We also sought to understand the role and effect of opposition to the new practice. We found to our surprise that nearly three-quarters of the administrators queried reported no opposition to the new practices. For those who did report opposition, 37 (22% of all administrators) said it came from teachers; the next source mentioned (by 7%) was parents. The only form of opposition that occurred with any regularity was criticism (mentioned by 24%). More active attempts to actually do something about what was opposed were few (Tables 2.16 - 2.18).

## Summary

Our picture of the context grows. We see support and endorsement from many sources and in many forms, both tangible and intangible. But, although support for the new practices was widespread and took many forms, little opposition to the practices was reported. Existing opposition emerged in the form of teacher criticism.

## School Improvement Activity

Many believe that in schools that are innovative, where "change is the name of the game," new practices are implemented more easily, quickly, and more successfully. Others believe that those schools that are "loaded" with innovations are most resistant to adding others. It was therefore of interest to us, to complete our picture of the context, to understand a school's past experiences with improvement efforts, as well as efforts underway concurrent with the new practice being studied.

To learn about school improvement history, we asked all administrators (implementing and non-implementing) how many and what school improvement efforts they had undertaken in the past 3 years. We found that schools and districts in our sample had been very involved in improvement-oriented activity. Administrators reported having implemented several new practices (the median value was 5, with a range of 1 to over 20) in the previous 3 years (Table 2.19).

We asked both administrators and school staffs (using the Building Work Climate Questionnaire) whether they thought theirs was a high, low, or average rate of school improvement activity compared to other schools or districts. A large majority of administrators (67%) said "high"; 31% said "average." Teachers were more conservative; only 27% said "high," with the remaining 73% reporting "average" (Table 2.20). This difference is quite interesting, and may be interpreted in several ways. First, administrators may have more opportunity to learn what occurs at other schools; they have cross-school meetings and may go to more external events (e.g., conferences) than teachers. They may "know" that the rest of the world gets involved in fewer innovations than their own district or school. Second, teachers may not view adoption of new practices as high in social desirability as do administrators. The administrator responses may in fact be somewhat inflated (or, inflated even more than teachers', in that teachers too may have succumbed to the social desirability norm). Finally, these data may be reflecting a tendency that we have seen elsewhere: that of different perceptions based on how close or far the respondent is from the focal point of a question. For example, teachers scored lower than administrators on commitment to use of the practice. This may be because, although quite positive, teachers are close enough to the practice to know its shortcomings. Likewise, teachers do not recognize as many and as detailed support activities as do principals. Here, principals are the ones who are closest to the support function, since they are responsible for it. In the case of school improvement activity, teachers who are closer to one particular practice are seeing the world differently than administrators, who oversee them all (practices and teachers). On the other hand, teachers are indeed in the middle of many improvement efforts, and they may see them as minor adjustments in the scheme of things, fitting in well with everything else involved in the "dailyness" of teaching. "The truth" is unclear, but the perceptions are certain. Both role groups see a significant amount of activity. Administrators see it as much greater than that occurring in other locations.

Current school improvement activity was also reported by administrators to be high, with a median of 3.6 improvement activities currently underway. Administrators were less extreme in this rating than with that of previous activity. Half rated this degree of activity to be "high" compared to other schools and districts, while the other half believed this to be "average" activity. Teachers, as before, rated the amount of activity as average. The reasons for these discrepancies may be the same as those discussed above (Tables 2.21 and 2.22).

## Summary

In this section we have attempted to paint a picture of the settings in which the school improvement efforts we examined took place. In general, our sites represent the wide variety of school districts in the country, from inner city to farm community, from one-room schoolhouse to high schools several thousand strong, and from pre-school to vocational-technical school settings. Although our demographic "means" are often not those of US schools as a whole (e.g., we have more rural and fewer urban), we could argue (and have in earlier sections) that our sample better represents schools where improvement efforts supported by government programs are underway.

The climate in our schools appears to be quite positive. Principals and teachers agree that the staffs are cohesive, either as one large group or as several small groups. The rapport among teachers, reported as cooperative and tolerant of dissenting opinions, further confirms that our schools were not "cliquish" or made up of isolated teachers. Further, we find a nice balance between independence and cooperation betwen teachers and building administrators. Teachers reported having a high level of autonomy for controlling what went on in their classrooms. They noted a good deal of support and responsiveness from their principals, who were viewed as wielding moderately strong (although not absolute) leadership in school matters. We also learned that most schools handle and solve their problems routinely and systematically, without a "crisis-management" orientation.

This picture of school climate is indeed a positive one. We find little conflict, isolation, authoritarian leadership, or crisis orientation. School staffs appear to be connected in ways that are mutually supporting, yet not unnecessarily constraining.

Our context picture is enhanced when we look at the support given for use of new practices, both directly through assistance and resources, and indirectly through endorsement. We noted that in a large majority of our settings, there had been an advocate or champion for the practice at either the school or district level, who "ramrodded" the project and made it happen. Assistance came from a variety of sources -- teachers, building administrators, central office facilitators, and external trainers -- each performing different and complementary roles. Projects were endorsed, most often by parents and people from the community. The lack of opposition is most notable, with the little that occurred coming from critical teachers.

Finally, we have long lists from administrator respondents of past and present improvement efforts in which their schools had participated. Although perceptions of this rate of activity differ between "average" and "high" compared to other schools, the amount is certainly significant. As we conclude this section, our picture is more complete, and shows busy schools, where change is common but not disruptive, and where people at all levels contribute in some way to make the efforts successful.

# CHAPTER III: NEW PRACTICES -- THE VEHICLES FOR SCHOOL IMPROVEMENT

One of the unique characteristics of the study was its focus on the implementation of specific practices supported by the four different federal strategies. Thus, we were able to interact with participants around a particular innovation -- usually a new curriculum or instructional approach -- instead of trying to understand some amorphous thing called "school improvement." As noted in the sampling section of Volume I, we were able to examine the use of 61 practices that were representative of those funded through the federal programs that exemplified the four strategies of interest.

In Volume I, we described the development of Practice Profiles, the methodology we used to operationalize and characterize each of the practices. Here we summarize briefly each of the characteristics we studied, and describe our 61 innovations on those characteristics. We then describe how these characteristics relate to each other.

## Characteristics of the Practices

We studied eight characteristics:

- purpose
- pedagogical approach
- complexity
- implementation requirements
- size
- prescriptiveness
- precision of definition
- concreteness of claimed benefits.

Each is described below.

### Purpose

The purpose represents either the intended use of the practice, or what it was designed to accomplish. On the basis of all we knew about the practice (including the developer's description of its purpose), we sorted each practice into the category below that came closest to describing its primary thrust:

- student basic skill remediation,

- programs for non-regular/special needs students,

- student process skill/personal development,

- integration of school with outside world, and

- materials or processes for regular subject areas.

The 61 practices were well distributed across the different purposes[22]. The category "student process skill/ personal development" contained the largest number of projects (30%), followed closely by "student basic skill remediation" (21%), and "programs for non-regular/special needs students" (21%). Fifteen percent of the practices integrated school with the outside world, and 13% provided materials or procedures within regular, traditional subject areas (Table 3.1).

It is interesting to observe different purposes for the practices across the programs we studied. The National Diffusion Network had more basic skill-oriented practices than any other type, largely due to the Title I NDN practices which all had this purpose. This "loading" on basic skills was also the case for state-administered programs. Locally developed Title IV-C practices, on the other hand, were more focused on personal development, non-regular students, and integrating school into the community. Half of the BEH practices were for special needs students.

This distribution can be attributed only in part to the quirks of our sampling. Some of it reflects explicit program goals, as in the Title I NDN practices, clearly developed and included in the NDN to upgrade the skills of disadvantaged students. BEH practices also reflect their program goals: to serve students with special needs (in this case, handicapped). The NDN generally seeks to cut across kinds of practices, to offer a wide range of alternatives to schools nationwide; our sample appears to reflect this range. Locally developed Title IV-C practices are a more interesting case. Here we see fewer basic skills practices (only one); rather, the practices that predominate seem to meet needs of a more narrowly-defined population. That is, a practice with basic skills development as its purpose has widespread application; one that focuses on non-regular students or process skill development may need to be slanted quite differently, depending on local students, norms, needs. A practice developed locally for these areas also may be more acceptable than one imported from the outside. This breakdown gives us some interesting ideas about where (i.e., to what federal program) local school people might be directed, should they want to select or develop a practice targeted at their particular need. It offers an interesting insight into successful mechanisms for blending the often conflicting goals of equity and excellence, and federal versus local initiative. Practices supported by federal initiatives, yet chosen to meet specific local needs, are possible through such mechanisms.

---

[22] In this section, as before, we summarize the findings except for those variables which were found to influence school improvement outcomes. For distribution tables, by program, see the Appendix.

## Pedagogical Approach

The pedagogical approach is the psychological or philosophical principle or technique that shapes the practice. As with purpose, we used our understanding of the practices to sort each into a category that came closest to describing its pedagogical approach. The practices and categories seemed to differ in their extent of teacher direction, reliance on content, and orientation toward group or individual. The categories, and the distribution of the practices, are:

- behavior modification (5%),
- experiential/personal development (16%),
- experiential/content-oriented/teacher-directed (18%),
- experiential/content-oriented/inquiry (12%),
- diagnostic-prescriptive/individualized/combination of teacher and student direction (18%),
- diagnostic-prescriptive/individualized/developmental (12%),
- diagnostic-prescriptive/individualized/highly teacher-directed (15%), and
- group-oriented/teacher-directed (5%).

Again, the 61 practices were well distributed across the pedagogical approaches, with no one approach having a disproportionate share of practices.

Overall, the same number of practices had a diagnostic/prescriptive method as had an experiential approach. When we look at a by-program breakdown, it appears that nearly three-quarters of the NDN practices were diagnostic/prescriptive (including all the Title I NDN practices). The state-administered practices were more often experiential (62%), as were the locally developed Title IV-C practices (58%). Perhaps practices disseminated to, or developed for, a more narrowly defined population, as in these last two programs, build more on the local environment and guide students to learn through experiences. This is certainly the case with those practices that link learning with the outside world (15% of the total). Again, this program breakdown allows us to understand some of the different approaches fostered by different strategies (Table 3.2).

## Complexity

Complexity is the first of six quantifiable practice characteristics (i.e., they range from more to less, rather than having categories that distinguish one practice from another). Table 49 gives the distribution of the practices on each of these characteristics; we wait until after we discuss all of them to display and then discuss differences across programs.

### Table 49
### Distribution of the Total Survey Sample Among the Quantifiable Characteristics Ratings

| N = 61 practices | Scores on Rating Scales | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Complexity | 8<br>(13.1%) | 15<br>(24.6%) | 18<br>(29.5%) | 14<br>(23.0%) | 6<br>( 9.8%) | |
| Implementation Requirements | 19<br>(31.1%) | 16<br>(26.2%) | 13<br>(21.3%) | 13<br>(21.3%) | | |
| Size | 12<br>(19.7%) | 10<br>(16.4%) | 10<br>(16.4%) | 10<br>(16.4%) | 10<br>(16.4%) | 9<br>(14.8%) |
| Prescriptiveness | 2<br>( 3.3%) | 9<br>(14.8%) | 27<br>(44.3%) | 13<br>(21.3%) | 10<br>(16.4%) | |
| Precision of Definition | 9<br>(14.8%) | 27<br>(44.3%) | 25<br>(41.0%) | | | |
| Concreteness of Claimed Benefits | 8<br>(13.1%) | 14<br>(23.0%) | 17<br>(27.9%) | 17<br>(27.9%) | 5<br>(8.2%) | |

BEST COPY AVAILABLE

The complexity is the number of items (e.g., time, materials, classroom organization, roles to coordinate) that the primary user has to take into account in order to implement the practice. We used a five-point scale to judge complexity -- the higher the rating, the more complex the innovation. Table 49 gives the distribution of the practices on this and other variables that follow. We appear to have an almost normal distribution on complexity, with few low and high complexity practices. Most are moderately complex.

## Implementation Requirements

The items and arrangements necessary to implement the practice (e.g., user skills, money, materials and equipment, personnel, training, organizational arrangements) all are included in the implementation requirements. We used a four-point scale to rate each innovation on the weight of these requirements. Again, Table 49 reports the distribution. The distribution is flat. It appears our practices ranged widely on how much was required to implement.

## Size

Size is a "macro-variable" in that it includes a variety of dimensions (see Practice Profiles section in Volume I). In general, it is an estimate of the scope and magnitude of the demands placed on both the teacher and the institution by the practice. We used a six-point scale; distributions are in Table 49. Note that our innovations are again evenly distributed with respect to this variable.

## Prescriptiveness

Prescriptiveness is the extent to which the developer attempts to restrict the discretion of the teacher with respect to implementing the required components of the practice. We used a five-point scale for prescriptiveness; the distribution is shown in Table 49. In this case, the distribution is skewed. Although most of the innovations were moderately prescriptive, there are more highly prescriptive innovations in our sample than ones with a few restrictions. Developers were relatively demanding in what they expected of adopters.

## Precision of Definition

The concreteness or clarity of the requirements for utilizing the components of a practice was its precision of definition. We used a three-point scale to rate this variable. Table 49 indicates that our innovations were precisely defined; few lacked clarity or concreteness. Again, a skewed distribution.

## Concreteness of Claimed Benefits

This variable represented how observable or measurable were the benefits that the developer claimed would be accrued from implementing the practice. Table 49 shows how our innovations were distributed on a five-point scale. Note that benefits were moderately concrete. Our distribution approaches the normal curve, with few practices having very concrete or non-concrete benefits.

## Program Differences for Quantifiable Variables

Table 50 displays the means for our different program samples on the six quantifiable practice variables. Here are some generalizations about how the practices in our sample compare with each other:

- NDN Non-Title I -- Compared to the remaining 49 practices, those we labelled NDN non-Title I tended to be larger, to be more complex, and to have benefits that are described more concretely.
- NDN Title I -- Compared to the other 55 practices we studied, those that Title I disseminates through the NDN tended to be smaller, to be more prescriptive, and to have benefits that are described more concretely.
- BEH -- Compared to the remaining 55 practices, the BEH practices were the highest on precision of definition (which has a narrow range) and size (which, because of the nature of the scale, means that BEH practices tended to be small), and were the lowest on complexity, implementation requirements, prescriptiveness, and concreteness of benefits.
- State-Administered -- Compared to the remaining 48 practices, those state-administered practices in our sample tended to be defined more precisely, to be less complex, and to have benefits that are described less concretely.
- Local Development Title IV-C -- Compared to the other 37 projects, those in our sample that were developed locally tended to be larger, to have more implementation requirements, and to be less precisely defined.

These differences are quite intriguing, as they help complete a picture of diversity across federal programs. We see a range from the small, simple, yet well-defined materials that BEH disseminates, through the large, complicated and more loosely defined practices developed locally with Title IV-C funds. The BEH strategy, marketing teacher-made materials through publishers' sales personnel lends itself to simpler practices, ones that teachers can use without much or any training. The Title IV-C strategy, on the other hand, is much more reliant on the local setting to define and implement the practices. Without the need for transportation, practices can be more pervasive, have more "moving parts," and can gain definition from the setting, both classroom and school.

## Table 50
## Comparison of Program Groups by Practice Characteristic Means

| | NDN | | | | | |
|---|---|---|---|---|---|---|
| | Non-Title I N = 12 | Title I N = 6 | BEH N = 6 | State-Administered N = 13 | Title IV-C Local Development N = 24 | All Practices N = 61 |
| Complexity | 3.50 | 3.00 | 2.00 | 2.46 | 3.08 | 2.92 |
| Implementation Requirements | 2.42 | 2.33 | 1.17 | 2.08 | 2.71 | 2.33 |
| Size* | 3.17 | 4.33 | 4.83 | 3.85 | 3.25 | 3.62 |
| Prescriptiveness | 3.33 | 4.67 | 2.83 | 3.15 | 3.21 | 3.33 |
| Precision of Definition | 2.17 | 2.33 | 2.50 | 2.46 | 2.12 | 2.26 |
| Concreteness of of Claimed Benefits | 3.17 | 3.67 | 2.17 | 2.69 | 3.00 | 2.95 |

*Higher ratings mean smaller size; the remaining characteristics increase in the other direction.

BEST COPY AVAILABLE

Looking at the disseminated practices, we find NDN non-Title I practices at the other end of the continuum from BEH. They are large and complicated. A commitment to use NDN non-Title I practices requires changes in behavior by many people, many times in concert with one another. This is in some contrast to the NDN Title I practices, which are smaller and less complex, yet highly prescriptive, and very concrete in the benefits they claim. Remembering that these are all diagnostic/prescriptive practices focused on basic skills development, this makes sense. The small size and complexity reflects the fact that they often can be used by a single classroom teacher without much organizational rearrangement; or, they are "pull-out," tutorial programs where the only "moving part" is a tutor in a lab who sees students on a regular basis. Such an arrangement complicates few lives and changes few roles in a school.

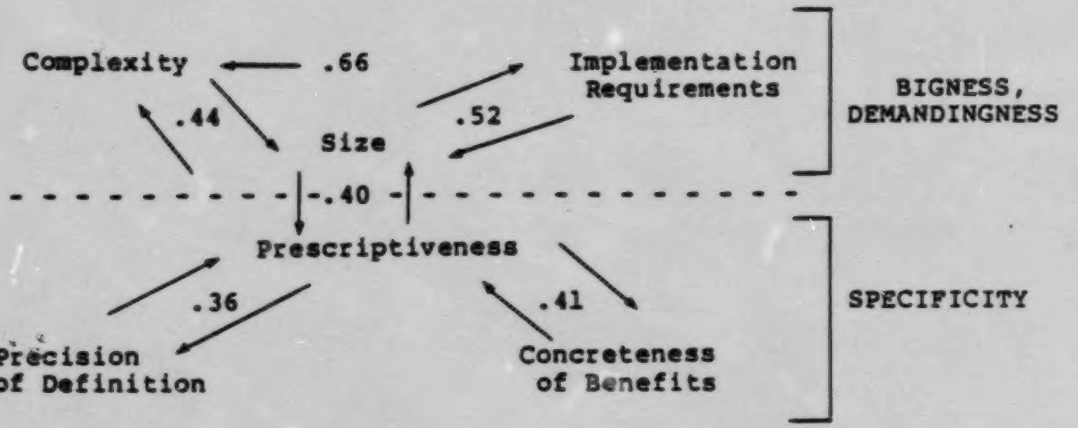
The state-administered practices seem to fall somewhere in between those discussed above. These are, in fact, a "mixed bag" since they contain a wide range of practices, some of which look quite a bit like those in the NDN (including Title I), and others look more like locally developed practices. It is hard, therefore, to generalize about these practices.

## Relationships Among the Practice Characteristics

A correlation matrix allowed us to explore the interrelationships among the quantifiable characteristics. The most important cluster of relationships is the most predictable, that among those characteristics which represent "bigness" and "demandingness": complexity, implementation requirements, and size. The largest relationship is between complexity and implementation requirements (r = .66), followed by that between implementation requirements and size (r = .52), and by that between complexity and size (r = .44).

This cluster of variables is then related to one representing "specificity," which includes prescriptiveness, concreteness of benefits, and precision of definition. As diagramed in Figure 2,

Figure 2
Relationships Among Practice Characteristics



prescriptiveness is significantly related to size (r = .40), concreteness of benefits (r = .41), and marginally related to precision of definition (r = .36) (Table 3.3).

The two "mega" characteristics of our sample of innovations, "bigness" ("demandingness") and "specificity" are useful descriptors for new practices, certainly in terms of helping potential adopters decide upon and choose between an array of alternatives. As we point out later, however, it was not the nature of the practices themselves that influenced the success of implementation; rather it was the amount of change required of a given individual that mattered. The same innovation required different amounts of change, depending where individuals were and what they were doing before adoption. So, although it is possible to array new practices on scales of complexity, prescriptiveness, etc., it is only when those practices are matched against the current practice of actual people that they assume meaningful proportions.

Now that our picture of the players, the settings, and the practices is complete, we turn to the outcomes of our school improvement efforts. What happened when this mixture occurred? Did anything change? If so, with what impact? The next section provides detailed responses to these queries.

# CHAPTER IV: THE OUTCOMES OF SCHOOL IMPROVEMENT EFFORTS[23]

Every effort to improve schools through dissemination has a more or less explicit set of desired outcomes: the "bottom lines" which tell program managers whether the effort has achieved the results they value. In this chapter we present the outcomes that we expected to occur as a result of the school improvement efforts we studied. As we discused in Volume I, many of those outcomes were explicit goals of the federal programs selected for examination. Here, we first describe the different sets of outcome variables. We consider each variable, describing how it was measured and the extent to which it was achieved in our sample[24]. We then summarize outcome differences for each of the four federal strategies we studied.

The aims of the school improvement programs we were examining were diverse, and so were the outcomes we measured. We assessed 18 different outcomes in five clusters:

- degree of implementation
- attitude toward the practice
- impact (on students, teachers, the organization)
- continuation and institutionalization
- attitude toward school improvement

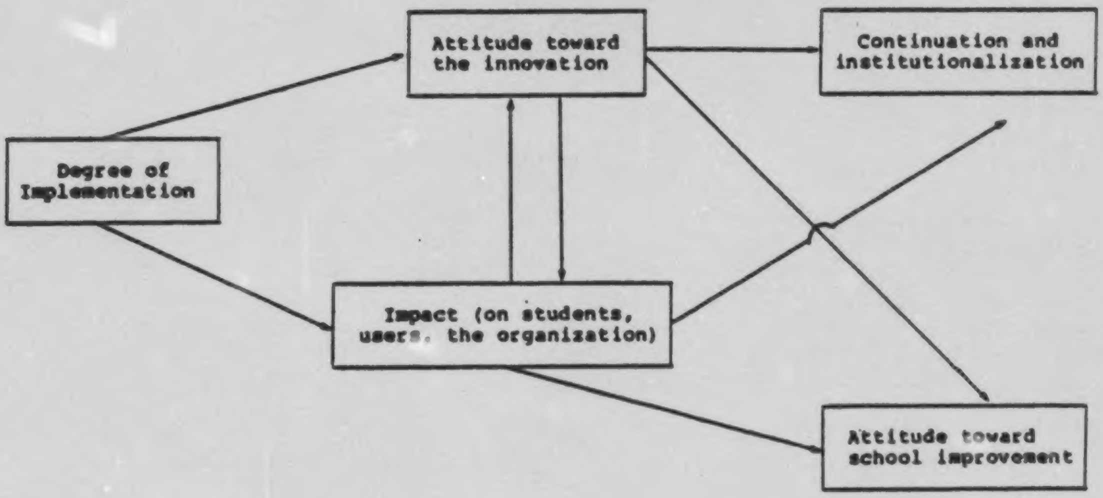
---

[23] A technical report, entitled The Outcomes of School Improvement Efforts by Matthew B. Miles and A. Michael Huberman, presents a full conceptualization and reporting of the results reported in this chapter. This report is available at cost from The NETWORK, Inc. for the reader interested in more detailed variable definitions, measurement, interrelationships, and comprehensive discussion of the findings than were possible in this summary volume.

[24] As in previous sections, we provide detailed discussions of only those variables that helped us explain the school improvement process in our causal models. Distributions of the other variables mentioned are included in the Appendix.

Figure 3 represents how we believed these outcomes were related to each other.

Figure 3
The Outcomes of School Improvement Efforts


Attitude toward the innovation
Continuation and institutionalization
Degree of Implementation
Impact (on students, users, the organization)
Attitude toward school improvement

We describe each outcome cluster in the sections that follow.

### Degree of Implementation

Any school improvement process rests on the idea that some new practice has in fact been carried out to a greater or lesser degree in the local setting. If no implementation[25], then no other outcomes are possible, at least none that can be attributed to the innovation. We collected data on several variables in this domain, as follows:

- change in practice: the difference between teacher's prior practice and the currently-implemented version.
- extent of implementation: the number of components of the practice that are in place.

---

[25] At the risk of appearing immodest, we note that prior to the development of the methodology used to measure innovation-user pairs reflecting current and past practice (our Practice Profile procedure) in particular contexts, no accurate, valid way of assessing degree of implementation across settings existed.

- fidelity: closeness of the implemented practice to the developer's "ideal" version ("replication" versus varying degrees of "adaptation/transformation").

- practice-specific mastery (Level of Use of the developer's version): skillful use of the practice's components as defined by the developer.

- practice-related mastery (Level of Use of the user's version): skillful use of the practice as locally defined.

Measuring the degree of implementation of new practices in the classroom required us to describe them carefully in terms of possible use. We did this with a Component Checklist, part of the Practice Profile developed for each innovation. (See Methodology Chapter in Volume I for detailed explanation of Practice Profiles, or Loucks and Crandall, 1982). This methodology, whose initial development was done through research at the Texas R&D Center for Teacher Education (Hall & Loucks, 1978), identifies key components of the innovation, and describes various ways the component might be operationalized in the classroom. A component, for example, might be a certain teaching strategy, a procedure for grouping students, or a system for record-keeping.

Briefly, we developed Component Checklists for each practice by reading descriptive materials, interviewing developers, and observing and interviewing teachers at exemplary sites. The final checklist (see Figure 4 for a sample) described the practice in terms of 4 to 12 key components; each component was depicted in several variations, described as ideal, acceptable, and unacceptable from the developer's perspective.

We used the Component Checklist in an interview with teachers to measure two aspects of use: (1) present practice (checklist was completed by the interviewer for each teacher, circling the variation within each component that best described current use; variations not on the checklist were specified); and (2) past practice (we asked teachers to describe what they had been doing prior to adoption in the innovation-relevant area, e.g., math; and filled out another checklist).

The two checklists for each teacher (present practice and past practice) were scored according to the variations circled for each component (Ideal = 3; Acceptable = 2; Unacceptable = 1; Absent = 0). Scores on each component were summed to provide total present practice score and total past practice score. Data from the checklists were used to derive three variables: change in practice, extent of implementation, and fidelity. The results of these are discussed below.

FIGURE 4 : Example of a Component Checklist

## COMPONENT CHECKLIST FOR STRATEGIES IN EARLY CHILDHOOD EDUCATION

| | | | | |
|---|---|---|---|---|
| **Component 1: Screening** | (1)<br>Early Childhood Assessment Instrument given to each child in classroom | (2)<br>Early Childhood Assessment Instrument given to each child in classroom, with some activities substituted, but objectives remain same | (3)<br>Instrument other than Early Childhood Assessment Instrument given or no assessment given at all | |
| **Component 2: Selection of Instructional Activities** | (1)<br>Activities used for each child's daily instruction based on child's assessed level | (2)<br>A majority, but not all of each child's instructional activity based on child's assessed level | (3)<br>Few, if any, of each child's instructional activities based on child's assessed level. | |
| **Component 3: Record Keeping** | (1)<br>Records which reflect performance on levels and objectives kept on each child -- chart of sequenced objectives used | (2)<br>Records which reflect performance on levels and objectives kept on each child -- chart of sequenced objectives not used | (3)<br>Records kept on group(s) of children and records reflect performance on levels and objectives | (4)<br>Records kept on each child, but do not reflect performance on both levels and objectives |
| **Component 4: Frequence of Use of Learning Centers** | (1)<br>Learning centers used 4-5 times a week to provide instruction or reinforcement based on each child's assessed level and objectives | (2)<br>Learning centers used on irregular basis to provide instruction or reinforcement based on each child's assessed level and objectives | (3)<br>Learning centers used for purposes other than providing instruction based on each child's assessed level and objectives | (4)<br>Learning centers not used |
| **Component 5: Referencing of Materials** | (1)<br>Teacher maintains formal classroom file or similar system which keys classroom material and activities to levels and objectives | (2)<br>Teacher maintains informal file, i.e., knows how materials and activities key to objectives and levels without having it written down | (3)<br>Teacher maintains neither formal nor informal files or similar system which keys classroom materials and activities to levels and objectives | |
| **Component 6: Opportunity for Self Selection (Interest Areas) (RELATED)** | (1)<br>Children provided opportunity 4-5 times a week to select their own activities | (2)<br>Children provided opportunity to select their own activities less than 4 times per week | (3)<br>Children rarely ever provided opportunity to select their own activities | |
| **Component 7: Learning Materials (RELATED)** | (1)<br>Variety of materials are used (e.g., manipulative, paper/pencil, games) | (2)<br>Materials used are largely selected from the Prescriptional Guide | (3)<br>Materials are largely teacher developed | (4)<br>Other single sources of materials are used (e.g., text, kit) |

Anything to the right of solid line is "unacceptable," to the left is "acceptable."
Anything to the left of dashed line is "ideal."

BEST COPY AVAILABLE

## Change in Practice

This outcome is the difference between the teacher's prior practice and what he or she is currently doing, adjusted by the number of components:

$$\text{Change in Practice}^{26} = \frac{\text{present practice - past practice}}{\text{number of components}}$$

Scores range from -3 (negative scores mean more-nearly-ideal variations of components were present formerly, but their use was terminated) through zero (no change) to a +3 (a change from using no components at all to using all components in ideal form).

Table 51 reports the results for our sample of teachers and sites.

Table 51
Distribution of Change in Practice Scores for Teachers
Data Source: User Interview

| Change in Practice | Percent of individual responses (N = 292) | Percent of site[27] responses (N = 135) |
|---|---|---|
| (-2.0) - (-1.1) | 1% | 1% |
| (-1.0) - (-0.1) | 5 | 3 |
| 0 - 0.5 | 22 | 21 |
| .6 - 1.0 | 15 | 19 |
| 1.1 - 1.5 | 20 | 16 |
| 1.6 - 2.0 | 16 | 24 |
| 2.1 - 2.5 | 12 | 10 |
| 2.6 - 3.0 | 9 | 8 |
| | 100% | 100% |
| Mean = | 1.2 | 1.2 |
| S.D. = | 0.94 | 0.91 |

---

[26] In the causal models, discussed at length in Volumes I and III, we split our sample by the amount of change that was required of the teacher by the practice. Having thus controlled for number of components, we did not compute "change in practice" by dividing by the number of components.

[27] Mean of teachers (2-6) at a site.

141

The range of scores on change in practice is quite substantial, with a flat distribution. The mean change, 1.2 units, shows that the "average" teacher went from the equivalent of "unacceptable" to "acceptable," not a small change. Looking at the low end, the shift from 16% of individuals to 4% of sites showing negative change shows us that such changes were idiosyncratic to individuals -- some teachers in some sites happened to have been doing things prior to the innovation that were nearer to the developer's ideal than their present practice.

## Extent of Implementation

We needed a measure of just how much of the practice had been implemented. Here we simply used the present practice score (sum of component scores, each of which ranged from 0 to 3, with a maximum of 12 components. The results are reported in Table 52.

Table 52
Distribution of Extent of Implementation Scores for Teachers
Data Source: User Interview

| Extent of Implementation | Percent of individual responses (N = 296) | Percent of site responses (N = 138) |
|---|---|---|
| 0 - 6 | 5% | 4% |
| 7 - 12 | 14 | 17 |
| 13 - 18 | 34 | 37 |
| 19 - 24 | 26 | 24 |
| 25 - 30 | 13 | 12 |
| 32 - 36 | 8 | 6 |
| | 100% | 100% |
| Mean = | 19.0 | 18.3 |
| S.D. = | 7.56 | 7.07 |

These figures show that the typical teacher was implementing the typical practice at somewhere between an "acceptable" and "ideal" level. (Ideal use of the typical practice with 8 components would give a 24.0 score; acceptable use of the same practice would have a 16.0 score.) Note, however, that this measure gives us only a rough idea of just how much had been implemented, because it is confounded with the number of components, which varied in our sample from 4 to 12, with a mean of 8.0. Our next measure helps solve this problem.

## Fidelity

This variable assesses the discrepancy between the developer's "ideal" and the teacher's current practice. It is calculated as a percentage of the developer's ideal as follows:

$$\text{Fidelity} = \frac{\text{present practice score}}{3 \times \text{number of components}}$$

The results are reported in Table 53.

Table 53
Distribution of Fidelity Scores for Teachers
Data Source: User Interview

| Fidelity | Percent of individual responses (N = 292) | Percent of site responses (N = 134) |
|---|---|---|
| 0 - .20 | 2% | 1% |
| .21 - .40 | 7 | 5 |
| .41 - .60 | 13 | 13 |
| .61 - .80 | 27 | 29 |
| .81 - 1.00 | 51 | 51 |
|  | 100% | 99% |
| Mean = | 0.8 | 0.8 |
| S.D. = | 1.00 | 0.21 |

The degree of fidelity in our sample is striking. Over 50% show at least an 80% replication of the developer's ideal version of the practice; a full 12% show 100% fidelity. And less than 25% of the sample fall below the 60% point. We must remember, however, that a teacher with an average component score of "acceptable" would have a fidelity score of .67; a fidelity score of .80 means only that the average component is implemented at a level of 2.4, as likely to be "acceptable" as it is to be "ideal." So the moderately high fidelity scores do not mean conformity to the developer's ideal, but describe a use that has some components used acceptably, and some ideally. And recall that a rating of acceptable is derived from criteria stipulated by the innovation's developer, who might be considered the appropriate arbiter of fidelity. Thus, we can conclude that the typical implementation is reasonably faithful: teachers have not strongly adapted the innovations, or implemented their components selectively.

The two remaining measures in the area of "degree of implementation" involve the assessment of Levels of Use of the Innovation, which we are calling Practice Mastery for ease of understanding. This concept and its measurement are described in detail in the methodology chapter of Volume I. Briefly, Levels of Use (LoU) constitute a developmental sequence of behaviors exhibited by teachers as they experience the change process. These levels, conceptualized through research at the Texas R&D Center for Teacher Education (Hall, Loucks, Rutherford & Newlove, 1975), are represented in Figure 5.

Figure 5
Levels of Use of the Innovation: Typical Behaviors

| Levels of Use | | Behavioral Indices of Level |
|---|---|---|
| VI | Renewal | The user is seeking more effective alternatives to the established use of the innovation. |
| V | Integration | The user is making deliberate efforts to coordinate with others in using the innovation. |
| IVB | Refinement | The user is making changes to increase outcomes. |
| IVA | Routine | The user is making few or no changes and has an established pattern of use. |
| III | Mechanical Use | The user is making changes to better organize the use of the innovation. |
| II | Preparation | The user is preparing to use the innovation. |
| I | Orientation | The user is seeking out information about the innovation. |
| O | Nonuse | No action is being taken with respect to the innovation. |

From: Hall, Loucks, Rutherford & Newlove, 1975.

The Levels of Use are operationally defined through a series of decision points differentiating one level from the next, and through a set of categories of different kinds of behaviors representative of individuals at each level. The Levels of Use are assessed through a standardized interview and rating procedure (Loucks, Newlove & Hall, 1975); we used the procedure as part of our teacher interview.

At the onset of the study, we did not know how "faithful" teachers' implementation would be. We decided to develop two LoU scores: one for the "developer's version" (this we labeled practice-specific mastery), and one for whatever practice was in place that even vaguely resembled the innovation (this we labeled practice-related mastery). In the interview, we first asked the teacher to describe use of the practice in terms of its components (derived from the Component Checklist). We then conducted a standard Level of Use Interview, focusing on this current practice. If one or more components were being used unacceptably, a branch was taken in the interview. We then asked questions to assess the teacher's intentions with respect to the "unacceptable" components.

## Practice-Specific Mastery

As just noted, we employed the ground rule that "use" would have to mean use of all components in either an "acceptable" or "ideal" version. If the teacher was using any component in an "unacceptable" or "absent" form, he or she was automatically assigned to Level 0, I, or II (Nonuse, Orientation, or Preparation) using the regular criteria for such assignment. The results are reported in Table 54.

Table 54
Distribution of Scores for Practice-Specific Mastery
Data Source: User Interview

| Level of Use | | Percent of individual responses (N = 296) | Percent of site responses[28] (N = 128) |
|---|---|---|---|
| 0 | Nonuse | 14% | 20% |
| I | Orientation | 25 | 25 |
| II | Preparation | 7 | 8 |
| III | Mechanical | 6 | 4 |
| IVA | Routine | 36 | 31 |
| IVB | Refinement | 8 | 9 |
| V | Integration | 2 | 2 |
| VI | Renewal | 1 | 2 |
| | | 99% | 101% |
| Mean = | | 2.6 | 2.4 |
| S.D. = | | 1.82 | 1.93 |

Even with this relatively hard-nosed measure, we note that 53% of the individual teachers, and 48% of sites, have levels of use that are Level III, Mechanical Use, or above (the standard LoU definition of what actual use involves). The bulk of teachers thus defined were functioning stably at Level IVA (Routine Use), and were not currently changing the practice. Of those not using the developer's version (in our strict sense), most were exploring the components they were not using for possible future use (i.e., 25% of individuals and sites were at Level I, Orientation). The 14%/20% reported at Level 0, Nonuse, had no intention of changing their use of the practice toward a developer-acceptable version. So we see that though average fidelity was high, there is a non-trivial portion of our sample who are defined as nonusers, if we take a harsh criterion.

---

[28] To calculate a site score, the values for teachers at the site were weighted (0 through VI corresponding to weights 0 through 7), then averaged and rounded to the nearest integer.

## Practice-Related Mastery

We can understand the Practice Mastery picture more fully if we turn to our more relaxed measure, which assigned LoU levels to whatever components were actually being carried out (even if in a way unacceptable-to-the-developer). The results are reported in Table 55.

Table 55
Distribution of Scores on Practice-Related Mastery
Data Source: User Interview

| Level of Use | | Percent of individual responses (N = 296) | Percent of site responses (N = 146) |
|---|---|---|---|
| 0 | Nonuse | 1% | 3% |
| I | Orientation | 0 | 1 |
| II | Preparation | 3 | 3 |
| III | Mechanical | 14 | 14 |
| IVA | Routine | 58 | 56 |
| IVB | Refinement | 17 | 16 |
| V | Integration | 5 | 5 |
| VI | Renewal | 3 | 3 |
| | | 101% | 101% |
| Mean = | | 4.1 | 4.0 |
| S.D. = | | 1.00 | 1.17 |

This distribution is typical of a sample of users who (like 83% of our users) have had at least a year's experience with an innovation: that is, the majority are at a Routine LoU (IVA), a sizable number are at the Mechanical (III) or Refinement (IVB) levels, and few are at Integration (V) or Renewal (VI). It is also not unusual to find some nonusers, in this case 1%/3% at Level 0, which may indicate teachers who had discontinued use for lack of funding or other reasons, and 3% at Preparation (II), teachers who had not quite begun use but were committed to doing so by a certain time.[29]

Our multiple assessment of degree of implementation indicates a wide variety of use of the new practices, skewed towards a more robust use than earlier studies (e.g., Berman & McLaughlin, 1975, 1978) would lead us to believe. When we carefully and painstakingly examined implementation at the classroom level (for, indeed, construction and use of a Component Checklist for each practice and two Levels of Use determinations for each teacher were difficult and exacting work), we found teachers using a remarkably large amount of the new practices in a stable, or at times even reflective, way. Nearly half of the teachers (47%) were using all the components in ways acceptable or ideal, according to the developer, at a routine level or better. Twelve percent of the teachers were being absolutely faithful to the practice; i.e., they were using every component in an ideal way. Added to this positive picture is an average change score revealing that what teachers were doing in their classrooms when we visited was considerably different than what they had been doing prior to the introduction of the practices. We were not, then, seeing classrooms that had always used strategies incorporated in the innovations; rather something meaningful had changed as a result of implementation.

---

[29] The proportion of nonusers is probably especially low in our sample, because (a) sites where the innovation had been discontinued were excluded, and (b) teachers who had discontinued (N = 15) received a separate interview, and are not included here.

We cannot stop here, before noting the other end of the range of our sample. We did discover that 46% of our teachers were using at least one component of the practice unacceptably, which meant the developer might not condone that particular configuration of use. These adaptations ranged from teachers' inability to use a particular component due to lack of resources, scheduling problems, or inadequate facilities; or teachers' disagreement with a certain strategy, or unwillingness to incorporate a certain behavior into their classrooms. The fidelity scores of these teachers were fairly low. Half of them, 22% of our total sample, scored .60 or lower; this indicates an average component score of less than acceptable, meaning more than half of the components were being used unacceptably or not at all. This is an interesting picture of nearly a quarter of our respondents.

Our degree of implementation measures gave us a snapshot of our teachers as users of new practices from many angles. Overall, we see a sizable proportion, over half, with robust use, adhering to the developer's practice; another quarter has adapted the practices significantly. What has contributed to these differences? Many factors, including the commitment of the teachers and the contributions of their administrators and facilitators. These causal relationships are discussed in Volume III.

## Attitude Toward the Practice

As a result of implementing an innovation, school people come to some kind of net assessment of its benefits and drawbacks. This assessment, we reasoned, could affect the practice's actual impact, would affect both later and continued use of the practice, and also might shape attitudes about future efforts to improve schools. Our interviews provided us with attitude data from teachers, administrators and, in some cases, from local facilitators. We included four attitude variables:

- net evaluation of the practice: the teacher's view of the strengths and benefits of the innovation, weighed against its perceived weaknesses and costs.

- negative aspects of implementation: the degree to which the innovation has problems or weaknesses, or causes the teacher unhappiness.

- practice as problem solution: the degree to which those implementing the innovation view it as a solution to problems they have been coping with.

- commitment to the practice: degree of pride, ownership, attention to the practice as a salient aspect of implementers' situations.

These variables are reported below.

## Net Evaluation of the Practice

To measure this variable, we first asked teachers, administrators, and local facilitators independently to tell us about the strengths and the benefits of the practice[30]. We also asked for weaknesses, and for problems encountered in the course of implementation. For each respondent, the perceived strengths and weaknesses were coded and summed, using the content analysis procedure described in Volume I. Then the weaknesses were subtracted from the strengths to form a net benefits scale.

Table 56 reports the results of this coding for three sets of respondents. Looking across individuals and sites, we found that most teachers and administrators, in effect, make a positive net evaluation of the innovation. At the median, the strengths, rounded to the nearest integer, sum to 2 more than the weaknesses. There was, however, a sizable percentage of respondents coming out with a negative balance or a draw; 24% of the teachers and 32% of the administrators. So administrators made more conservative judgments. Since many of the innovations we studied were within-classroom practices, it may be that the teacher assessment is the most accurate single measure.[31]

The typical local facilitator had a net evaluation rather like that of administrators. But the distribution is different: more local facilitators ended up with a negative or neutral score (43%), and more showed a high score (3 or greater: 45% versus 34% for other administrators). Perhaps, since they were working closely and committedly with the new practice, some saw its

---

[30] Note that the benefits and strengths listed by teachers became a separate variable in the individually focused causal model, simply labeled "benefits." Again, see Volume III for more details.

[31] Other analyses support this idea: teachers, to whom the innovation is more salient, report both more strengths/benefits and weaknesses/problems than administrators; even so, their net scores remain higher.

# Table 56
# Net Evaluation of the Practice (Computed Score), by Teachers, Administrators, and Local Facilitators

Data Source: User, Administrator, and Local Site External Agent Interviews

| | Teachers | | Administrators | | |
|---|---|---|---|---|---|
| | Percent of individuals (N = 289) | Percent of sites (N = 118) | Percent of total implementing administrators (N = 174) | Percent of sites (N = 117) | Percent of local facilitators (N = 52) |
| -4 | 0% | 0% | 1% | 1% | 0% |
| -3 | 1 | 0 | 2 | 1 | 0 |
| -2 | 2 | 1 | 5 | 7 | 12 |
| -1 | 7 | 2 | 6 | 7 | 12 |
| 0 | 14 | 7 | 18 | 21 | 19 |
| 1 | 22 | 25 | 19 | 15 | 6 |
| 2 | 23 | 33 | 21 | 14 | 10 |
| 3 | 12 | 17 | 20 | 20 | 25 |
| 4 | 10 | 11 | 8 | 8 | 10 |
| 5 | 5 | 4 | 0 | 3 | 2 |
| 6 | 2 | 0 | 0 | 1 | 0 |
| 7 | 1 | 0 | 0 | 2 | 4 |
| 8 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0% | 0% | 0% | 0% | 2% |
| | 99% | 100% | 100% | 100% | 102% |
| Mean = | 1.8 | 1.9 | 1.6 | 1.5 | 1.1 |
| S.D.= | 1.96 | 1.34 | 2.19 | 2.06 | 1.42 |

strengths and beauty marks more vividly; others emphasized the warts -- the difficulties they had encountered in installing the innovation.

As reported in Chapter I of this volume, we also asked people to make a direct judgment of the degree to which the innovation's advantages outweighed the disadvantages. We found that practically everyone judged the new practice as unqualifiedly worthwhile, though teachers were more likely to have reservations ("advantages somewhat outweigh disadvantages") than administrators and local facilitators. When we separated principals from superintendents, the principals had a profile somewhat closer to that of teachers. So those closest to the action were inclined to be a bit more conservative. However, the dominant picture is one of a very positive assessment of the innovation. So, as computed by us, and as rated by site respondents directly, the general picture is one of rather favorable net evaluations by teachers and administrators, and by local facilitators.

## Negative Aspects of Implementation

Looking over all outcomes, the experience of using these new practices was reported as strongly positive for most teachers, administrators, and local facilitators. There were, however, some complaints, major and minor, and we tried to assess them as carefully as possible.

Asked to describe the weaknesses and problems of the practice, teachers, administrators, and local facilitators all frequently mentioned problems inherent in the innovation (e.g., methods, materials) and logistical difficulties (e.g., time, communication, management/coordination). Items posing relatively few problems included training, evaluation, and -- a problem somewhat more problematic for administrators and local facilitators -- funding. Taken at face value, this is good news; in research on the dissemination of educational innovations during the past decade, these three items have figured prominently on the list of woes drawn up by school personnel (Tables 4.1 and 4.2).

Teachers appear to have been plagued chiefly by nuts-and-bolts issues facing them in the classroom. Principals also mentioned these issues but focused as well on problems likely to plague a building administrator, such as management, staffing, friction, and funding. (Curiously, administrators rarely mentioned resistance by teachers to the innovation, a problem highlighted by teachers, who may be more sensitive to reservations about the new practice on the part of their peers.) Management issues also preoccupied superintendents and, still more so, local facilitators. The number and variety of difficulties mentioned by local facilitators probably reflects their personal investment in the innovation. That management/coordination problems were mentioned twice as often by local facilitators, as by principals, reflects the fact that these dual-role administrators had a direct role in program implementation.

Overall, teachers mentioned substantially more weaknesses/problems than administrators. As before, when we separated principals from superintendents, principals had more complaints. This is probably another example of the dictum that "those closer to the action know best." We should remember though, that the type of problem or weakness does differ from role to role, so strict comparability is not present.

We also probed implementation difficulties by asking users to mention "anything negative that happened to you as a result of getting involved with (the new practice)". Almost two-thirds of the teachers mentioned no such effects, and only 5% mentioned more than one. Those who described how they were negatively affected by the new practice included descriptions such as "frustrated and discouraged," "criticized by teachers," and "questioned by parents." The field study report (Volume IV) documents effects like these in more detail (in many cases, they are not trivial) and ties them to events at the local sites (Tables 4.3 and 4.4).

## Practice as Problem Solution

A good deal of empirical research (e.g., Berman & McLaughlin, 1978; cited in Fullan, 1982) indicates that innovations tend to be adopted and more fully carried out when they constitute a solution to an instructional or administrative problem confronted by educators. A forced-choice item was included on the questionnaires filled out by teachers, administrators, and local facilitators; it asked whether the innovation "solves problems I have been grappling with for a while" or "doesn't really address problems I have encountered (in teaching, in schools)."

We found that the degree of problem solution provided by these practices was high for all respondents (over 87% said it solved problems), and particularly so for superintendents (96%), and local facilitators (91%). Our picture of positive, satisfied individuals involved in school improvement grows (Table 4.5).

## Commitment to the Practice

Commitment, naturally, is an important expression of teachers', administrators', and facilitators' attitudes towards the practice with which they are involved. It is also one of those variables that has ended up being treated as both an outcome and an influence on outcomes. Here we refer the reader to Chapter I of this volume for detailed findings about the extent of commitment of the teachers, administrators, and local facilitators in our sample. In brief, we found a high degree of commitment from all respondents, with administrators scoring on the average a bit higher than teachers. As noted in our discussion of analysis procedures in Volume I, our causal modeling technique allowed us to place this variable in the chain of influences on school improvement. We then could ask both questions: what causes commitment? and what impact does commitment have on other school improvement outcomes? See Volume III for the answers.

### Summary

Teachers, administrators, and local facilitators all reported positive assessments of their experiences in carrying out the practices studied. Strengths, benefits, and advantages clearly outweighed weaknesses, problems, and disadvantages, although implementation difficulties were mentioned by about a third of our teachers. Working with the innovation was seen to solve classroom and school-wide problems and generated sentiments of professional pride. Teachers had slightly more reservations about the experience than did principals, who in turn made lower overall assessments than superintendents and local facilitators. The pattern seems to be that people closer to everyday use of the new practice, yet not institutionally identified with it, had slightly more reservations about the practice than others.

## Impact

What were the effects of the new practices? We focused on three types of impact:

- student impact: the practice's effects on students, including achievement, socio-emotional gains, and solutions to problems;
- teacher rewards: the practice's effects on teachers, including satisfaction, personal growth, and professional advancement;
- organizational changes: transformations or shifts in the school which follow from implementing the practice. These may occur at two levels: immediate classroom or instructional changes, and building-level changes.

### Student Impact

We asked teachers open-ended questions about the strengths and the benefits of the practice. All but 9% of the sample emphasized strengths or benefits for students. These included student achievement (mentioned by 52% of respondents), student socio-emotional state (mentioned by 41%), and individualized attention (mentioned by 21%) (Tables 4.6 and 4.7). That such a large percentage of the teachers mentioned benefits to students emphasizes the depth of commitment thay have to the practices. These are not just "teacher-pleasing" innovations, making their lives easier or giving them "something different" to keep them from being bored. We purposely asked about benefits in an open-ended way, so that teachers could have noted only rewards they themselves accrued. Teachers actually see, and so can report, student changes resulting from the practice.

Furthermore, it is interesting to note that the goals of the practice, as reported by teachers (see p. 15), are the same as the kinds of impact they report seeing on their students: achievement and personal growth. To a great extent, then, we see that the goals have been achieved.

## Teacher Rewards

Implementing innovations presumably benefits the implementers in various ways. We asked teachers, "What rewards or incentives have you received as a result of getting involved in (the practice)?". Roughly two-thirds of teachers who are using the practice report some form of personally-oriented "reward or incentive." Another 16% mentioned gains that were professional in nature. We should also note that 34% mentioned student achievement as a "reward" to themselves, 16% mentioned student behavior/attitude change, and 10% student-teacher interaction. While teachers are not "selfless," and do note benefits to themselves, it appears that improvements for students are directly rewarding as well (Tables 4.8 and 4.9).

## Organizational Change: Classroom Level

On the question asked (above) about strengths and benefits of the practice, we noted that some teachers mentioned organizational changes that had occurred at the classroom level. These included:

| | |
|---|---|
| provided instructional approach | 36% |
| coordinated/organized curriculum | 24 |
| provided assessment procedures | 14 |
| increased or allowed for flexibility | 5 |

Nearly two thirds of the teachers reported having made one or more classroom-level organizational changes, with an average of one change. We should note that in an analysis of the relationship of impact variables, we found that this variable was negatively related to student impact. More careful examination revealed that teachers who reported classroom changes appeared to be engaged in incomplete, partial implementation; they focused on classroom-level changes of a general sort, while teachers who were engaged in full-scale implementation tended to report student impact (Table 4.10).

## Organizational Change: School Level[32]

We reasoned that school-level organizational changes should be more visible to administrators than to teachers. Principals and superintendents were asked, "What do you see as the benefits that have been gained from using (the practice)?"

---

[32] This is the variable labeled "organizational change" in the school-focused causal model discussed in Volume III.

Administrators at 36% of our sites indicated that no school-wide changes had resulted from use of the practice. Another 30% mentioned one kind of change, 15% mentioned two kinds of changes, and administrators from 21% of our sites listed three or more changes (Table 4.11).

For those administrators reporting organizational changes, Table 57 lists the areas in which those changes had occurred.

Table 57
Kinds of School-Level Organizational Changes
Reported by Administrators
Data Source: Administrator Interview
Content Analysis

| | Percent of principals (N = 104) | Percent of superintendents (N = 74) |
|---|---|---|
| Instructional methods | 29% | 27% |
| Staff socio-emotional state | 22 | 9 |
| External communication | 18 | 19 |
| Staff skills | 16 | 19 |
| Materials | 11 | 4 |
| Plans/schedule/organization | 10 | 3 |
| Staff communication | 9 | 5 |
| Number of staff | 8 | 4 |
| Assessment procedures | 7 | 7 |

Like teachers, administrators mention instructional methods, but they are more likely than teachers to mention matters of communication, socio-emotional states (e.g., school climate), and similar organization-wide issues. From this listing, and from the sheer numbers of changes reported by our respondents, we see that on balance, administrators are considerably less voluble about organizational benefits than teachers are about student benefits. This finding fits with the fact that most of the practices studied were instructional, and did not require extensive organizational alteration for effective implementation.

## Summary

In this section, we have described a large number of effects that use of the practices has had on students, teachers, and schools. We found that some student impact (either achievement-related or socio-emotional) was mentioned by nearly all teachers; this represented achievement of the purposes of the practices, as reported by all respondents. About two-thirds of the teachers said that they experienced personal and/or professional gains as well; two-thirds also mentioned having made classroom-level organizational changes. In two thirds of the sites, administrators reported school-wide changes in areas such as instructional strategies, staff morale, and communication outside of the school. Overall, these effects appear to be quite positive, to take multiple forms, and to help explain why commitment to the practices is so high in all kinds of respondents.

## Continuation and Institutionalization

What was the future of the practice in its local setting? Here we examined three variables:

- percentage of use: the ratio of actual current users to the population of potential users of the innovation, in a given building or district (in effect, amount of internal diffusion of the practice);

- plans for continuation: intent to continue or expand use of the innovation within the building or district;

- institutionalization: presence of structural features that support/ensure continued, routinized use of the practice.

Each is discussed below.

### Percentage of Use

We asked administrators during the interview to give the total number of users of the innovation (in the building and in the district), and to give the total number of eligible users at each level as well. (For example, the percentage of use for a science-related secondary school program was computed on the basis of the total number of science teachers who, in principle, could use it.)

The measure of most relevance to us was the building-level percentage of use. It showed a "hollowed out" distribution. Forty percent of administrators reported that all eligible users were involved with the innovation. On the other hand, at 43% of sites, administrators reported that fewer than half of the eligible teachers were users (Table 4.12).

Why was this the case? How were the sites that were "permeated" with users different than those more sparsely populated? One guess was that the number of years since adoption might influence the "spread" of use; the more years of experience, the more opportunities for other teachers to adopt, and the higher percentage of use. When we looked at the percentage of use data by year of adoption, however, there was no pattern. Mere years of experience did not influence spread; nor did the opposite result, i.e., as more time passed, more teachers did not "drop out" (Table 4.13).

It seems that once a site decides to use a new practice, the number of teachers committed remains fairly constant throughout the life of the practice. As we noted in Chapter I in describing our teachers, they spend relatively little time telling other teachers about the practice or training them to use it. Our experience tells us that teachers have enough to do with the requirements of new practices, without also being "disseminators." We also note that none of our administrators mentioned anything else like "recruit, train, acquire new users" as a role they took on related to the practice. Further, it was one of the least often performed assistance functions of both our local and external facilitators.

However, the fact that no efforts are made to expand the number of users at a site does not tell us why percentage of use is either 100% or less than 50%. With existing analyses, we can only guess. Perhaps sites are either characterized by administrators making an adoption decision for everyone, or by a call for volunteers (resulting in less than half volunteering). Whatever the reason, this remains an interesting focus for further analysis.

## Plans for Continuation

What did teachers and administrators think would be happening with the innovation in the immediate future? We asked teachers, "As you look ahead to later this year, what plans do you have in relation to your use of (the practice)?", and "Do you have any long-range plans to make major modifications or replace (the practice) at this time?". The responses were coded and categorized as in Table 58.

Table 58
Plans for Continuation as Reported by Teachers
Data Source: User Interview
Content Analysis

| | Percent of individuals (N = 296) | Percent of sites (N = 138 ) |
|---|---|---|
| Expected Continuation | | |
| Eliminate or reduce use | 3% | 2% |
| Maintain at present level | 53 | 47 |
| Maintain, with additions (e.g., new students, new subject matter, new teachers) | 40 | 46 |
| Expand (e.g., to all grades, other schools, whole district) | 4 | 4 |
| | 100% | 99% |

The general picture here is one of stable continuation. If the large number of respondents who said "maintain with additions" appears to contrast the previous discussion of "no spread," we should note that of the 40% reported, nearly all (33 percentage points, of the 40) mention addition of new subject matter, without speaking of movement to new teachers, students, grades, other schools, etc.

The question we asked administrators was different: "Do you think (the practice) will be around two years from now? Why or why not? Do you think it will look the same?" The responses were categorized as in Table 59.

Table 59
Plans for Continuation as Reported by Administrators
Data Source: Administrator Interview
Content Analysis

| Expected Continuation | Percent of sites (N = 122) |
|---|---|
| No | 5% |
| With changes | 60 |
| Yes | 35 |
| | 100% |

It seems likely that the category "with changes" actually contains two sub-responses: the need to adapt or revise the practice in some way, and the expectation of expanding its use. We see this from comparing teacher and administrator responses from the same sites (Table 60).

Table 60
Comparison of Teacher and Administrator Responses Related to Plans for Continuation of the Practice
Data Source: User and Administrator Interviews

| | Teacher Responses: | | | | |
|---|---|---|---|---|---|
| Administrator Responses: | Reduce | Maintain | Maintain+ | Expand | N of Sites |
| No | 0 | 3 | 1 | 1 | 5 |
| With changes | 1 | 28 | 34 | 3 | 66 |
| Yes | 0 | 20 | 18 | 1 | 39 |
| | | | N of sites = | | 110 |

Here we see that of the 66 sites where administrators anticipate that changes will occur, 37 or 56% have teachers expecting maintenance-plus, or expansion; and 28 user sites (42%) predict only maintenance. Of the 39 sites where administrators show an unqualified "yes," only 19 (49%) have teachers predicting addition/ expansion, and 20 (51%) expecting maintenance. So "with changes" as seen by administrators seems to signal to some degree that more than routine continuation lies ahead, as teachers see it. We also note again the differing world-views of administrators and teachers; the correlation in the table is only .04.

## Institutionalization

To what extent were the innovations we studied "built in" to their local settings? Were there structural features that would support continued, routinized use? On the questionnaires given to teachers, administrators, and local facilitators, we included a checklist of items bearing on institutionalization.[33] Table 61 shows these items, and the percentage of people saying they were present.

Generally, we note that training for new staff, incorporation into curriculum, and purchase of materials and supplies were more frequent indicators, with new budget and staff less frequent. The figures for administrators were higher than for teachers on the first three items, and are probably inflated: teachers were "closer to the action," in a better position to know whether new staff training, in-service, and curriculum incorporation really had occurred. Note too that the superintendent figures were more conservative than those of the principal on matters he or she really knew something about -- new staff hiring and budget -- although he or she gave higher, and probably unrealistic, estimates on the first three items in comparison to the principal.

---

[33] Here we acknowledge the work of Yin (1978), which suggested variables for which items were constructed.

### Table 61
### Responses of Different Role Groups to Indicators of Institutionalization
### Data Sources: User, Administrator, and Local Site External Agent Questionnaires

| Institutionalization Items | Percent of teachers (N = 296) | Percent of princi-pals (N = 104) | Percent of super-inten-dents (N = 73) | Percent of local facili-tators (N = 68) |
|---|---|---|---|---|
| New staff receive training and orientation in the new practice. | 60% | 65% | 82% | 62% |
| We have training programs or inservice for current staff to maintain use of the new practice. | 39 | 50 | 69 | 72 |
| The new practice is formally incorporated into curriculum plans. | 59 | 69 | 76 | 73 |
| We have written guidelines for the use of the materials and methods from the new practice. | 50 | 50 | 51 | 57 |
| We purchase new materials and supplies in order to maintain the use of the new practice. | 63 | 65 | 69 | 63 |
| We hire new staff members specifically to support the use of the new practice. | 25 | 33 | 29 | 40 |
| Our budget includes a separate line item to support the use of the new practice. | 28% | 28% | 24% | 37% |

The fact that the local facilitators, where present, gave very high figures on in-service, curriculum incorporation, guidelines -- and for staff hiring and budget as well -- probably follows from their usual responsibility for these matters. The higher figures on staffing and budget may have come from a position of advocacy in relation to the innovation.

Item analyses showed that all seven items correlated well with the total score, for both teachers and administrators. The total scores are displayed in Table 62.

## Table 62
## Distribution of Scores on Institutionalization for Teachers and Administrators
## Data Sources: Teacher and Administrator Questionnaires

| | Teachers | | Administrators[34] | |
|---|---|---|---|---|
| Institutionalization | Percent of individuals (N = 296) | Percent of sites (N = 143) | Percent of all administrators (N = 173) | Percent of sites (N = 114) |
| 0 | 12% | 12% | 4% | 4% |
| 1 | 14 | 13 | 6 | 7 |
| 2 | 11 | 14 | 19 | 19 |
| 3 | 19 | 27 | 15 | 15 |
| 4 | 21 | 13 | 22 | 21 |
| 5 | 13 | 10 | 15 | 12 |
| 6 | 5 | 8 | 10 | 12 |
| 7 | 6 | 2 | 10 | 8 |
| | 101% | 99% | 101% | 98% |
| Mean = | 3.1 | 2.9 | 3.8 | 3.7 |
| S.D. = | 1.98 | 1.84 | 1.87 | 1.90 |

For teachers, the typical response is that 3 of the 7 institutionalization features were in place; administrators were more optimistic, with nearly 4 being the typical response. Even so, we should note that 4-12% said none of the features was in place, and if we argue that a strongly institutionalized innovation should have all (or nearly all) of the features in place, few of our sites (20% for teachers, 32% for administrators) met such a criterion. So though nearly all our sites' teachers and administrators believed the innovation would continue, the presence of features to support durable continuation was not strong. Fortunately, the distribution of our institutionalization measures is good enough that we can explore more fully reasons for strong and weak institutionalization.

---

[34] The administrator score, aggregated at the site level, was used as the measure of "institutionalization" in the school-focused causal model discussed in Volume III. This was because institutionalization is conceptually a site level phenomenon, and thus the principal is the best source of valid data for the building.

### Summary

In this section we have described our respondents' expectations for the future of the new practices they were using. We found that the great majority of both teachers and administrators expected these practices to remain in use, and nearly half the teachers saw them expanding to other segments of the classroom or curriculum. We saw reason to believe that spread of the practice to other teachers was unlikely, since in nearly half of the sites, all potential users were involved. As for the other half, no activities seemed to be ongoing to "capture" nonusers, and our hunch from looking at years of experience is that numbers do not grow over time in any predictable way.

As for changes in the practices themselves, 60% of our administrators had plans for revising the innovations in use, possibly as a function of expanding them. In many cases, however, teachers' or administrators' intentions were not backed up by the requisite structural measures that would ensure continuation, such as formal incorporation into the curriculum, or provisions for continuing budget. These indicators of institutionalization were, overall, only partially in place, with wide variation among sites. This is an interesting example of spoken intentions, perhaps without the "wherewithal" to make them come about.

## Attitude Toward School Improvement

Finally, we focus on what we have called "meta-outcomes" of school improvement efforts: the attitude that teachers and administrators come to have toward school improvement both generally and in the future.

Here we focused on two variables:

- general attitude to school improvement: positive, neutral or negative stance toward efforts to improve schools;
- desire for future school improvement: wishes that school improvement efforts (locally) should be increased, maintained, or decreased.

Both are discussed below.

### General Attitude to School Improvement

On the Building Work Climate Questionnaire given to all school faculty, we asked, "In general, how do you feel about attempts to improve your school by adopting new teaching practices and materials?" A similar item on the administrator questionnaire, after asking for the number of school improvement efforts currently underway, asked, "In general, what is your reaction to such efforts?"

Data indicate that the administrators' attitudes were overwhelmingly positive (97%), perhaps because they were asked about specific school improvement efforts (most of which they had presumably had a hand in approving and managing). The faculties' views, while still stacked in a positive direction (66% positive, 27% neutral) were more moderate. Even so, negative attitudes were rare; the cynicism count was low in this population. This finding is quite congruent with those noted earlier: our study dealt with people who, by and large, thought the practices they had been implementing were a good idea; and people closer to the implementation action were somewhat less positive about it (Table 4.14).

## Desire for Future School Improvement

Since past is prologue, a second critical indicator of attitude to school improvement, we felt, would be people's wishes about the amount of such activity that should occur in the immediate setting. On the Building Work Climate Questionnaire, we asked teachers to complete this item: "I feel school improvement activity in this school should be (increased, maintained at the present level, lowered)." The identical question was asked of administrators.

When it comes down to what should be done in a real, presumably immediate future, data indicate that attitudes to school improvement were a bit less sanguine, though still basically positive. Nearly two-thirds of individual school staff (61%) thought there should be more of it; almost all the rest opted for maintaining the present level (36%). However, administrators were somewhat more conservative: 53% of the principals and 56% of the superintendents wanted to increase activity; 47% and 44%, respectively, wanted to maintain. Apparently the questionnaire itself had just reminded them of all the school improvement efforts they were shepherding, and, for some, the impluse to "maintain" rather than increase the number must have welled up. Given a pool of such activities in a school (the median number reported by administrators was 3; nearly a quarter of schools reported 5 or more), all were by definition visible to administrators. Many fewer would be visible to the typical faculty member, who ordinarily would know only of school improvement activities (if any) in which he or she or close friends were engaged (Table 4.15).

## Summary

When we looked at their attitudes towards school improvement in general, we found that those of administrators were more positive than those of building faculties, especially when it came to current efforts. When school staff and administrators looked toward the future, administrators were less inclined than staff members to feel that school improvement efforts should be increased. However, there is a striking lack of negative attitude for both measures, for both roles; the stereotype that teachers (or administrators) are cynical, resistant, or against school improvement efforts is not borne out by these data. Here, as in other data reported for our sample, we see educators trying hard and experiencing success in their school improvement projects.

## Summary: Outcomes of School Improvement Efforts

Let us summarize briefly what we have learned about outcomes, having reported on our data set as a whole. In the "degree of implementation" cluster, we found evidence that most teachers had achieved a stable use of the practice at moderate fidelity levels, changing a good deal from their prior practice in the process. In the "attitudes to the practice" cluster, advantages, strengths and benefits of the innovation outnumbered disadvantages, weaknesses, and costs for all roles at the sites, although teachers were less favorable than administrators and local facilitators.

In the "impact" cluster, we found that student impact was mentioned by nearly all teachers; organizational impact in about two-thirds of sites; personal benefits for teachers by about two-thirds; and classroom-level changes by about two-thirds. Turning to "continuation and institutionalization," we saw that plans for continuation, including expansion within the school district, were almost universal, though some revisions were likely for most of the sites. However, only about half the administrative measures needed to institutionalize the practice were formally in place, with marked variation from one site to another.

Finally, in the "attitudes to school improvement" cluster, we found that both school faculties and administrators had a positive general attitude to school improvement efforts, and believed they should be increased. Administrators were somewhat more optimistic on the former, but conservative on the latter.

Our findings on outcomes were strongly positive: the picture is one, by and large, of users and managers who were satisfied with their innovative accomplishments.

## Interrelationships Among Outcomes

The previous discussion of outcomes shows what resulted from efforts to improve schools by implementing new practices. But what of the relationships among the outcomes? Were they all independent phenomena, or did some relate empirically to others?

At the beginning of this section, we displayed a model for the relationship among outcomes (see Figure 3). We tested the model in two ways. First, the model was integrated into a more general model containing a fuller set of variables from the study. This procedure and the results of our causal modeling are discussed in Volume III.

A second technique consisted in identifying those outcomes we felt were at the "bottom line" of the school improvement process, then determining which linear combination of all the remaining outcome measures best accounted for the variation in these "bottom-line" variables.

We chose two such measures: institutionalization, and attitudes toward school improvement. Our reasoning was that the institutionalization measure was the most likely end-outcome of the school improvement process. Innovations stood or fell in the medium term according to how durably they were inserted in the fabric of the school district, and the best measure of this would be the formal, structural steps taken to ensure that insertion. There was also the possibility that this school improvement effort -- whether successful or unsuccessful -- would have a more general influence on other attempts to incorporate new ideas and practices. Taking this long view, the specific project would be one in a series of school improvement efforts and, depending on its outcome, would have a cumulative or countervailing impact on other attempts. We had asked both teachers and administrators for their opinions about future school improvement activity.

To summarize our findings,[35] we did discover some meaningful predictors of institutionalization (see Figure 6). Teacher-perceived institutionalization is predicted best by high levels of change in practice, practice-specific mastery, teacher pride in practice (an item from the commitment scale), and by what appears to be "completeness of implementation." The last predictor is inferred from the fact that the measure of classroom-level organizational change, has a negative predictive weight. As we noted earlier, teachers who mentioned these kinds of changes were less likely to mention student impact, and also were less likely to score high on change in practice, expected continuation, practice-specific mastery, among other variables. This is a picture of less-complete implementation, and so the negative correlation with institutionalization makes sense (Table 4.16).

We were able also to predict administrator-perceived institutionalization (see Figure 7). Three outcomes account for variance: extent of implementation, administrator commitment, and plans for continuation. The pattern seems clear. When more of the practice is implemented and key administrators are committed to it and plan to continue its use locally, the practice is more likely to be structurally built into ongoing school activities and procedures (Table 4.17).

---

[35] A fuller explanation of these findings is found in Miles and Huberman (1982). Summary tables for the regression analyses are referred to in the text and can be found in the Appendix.

Figure 6[36]
Predictions of Institutionalization (Teacher Perception)

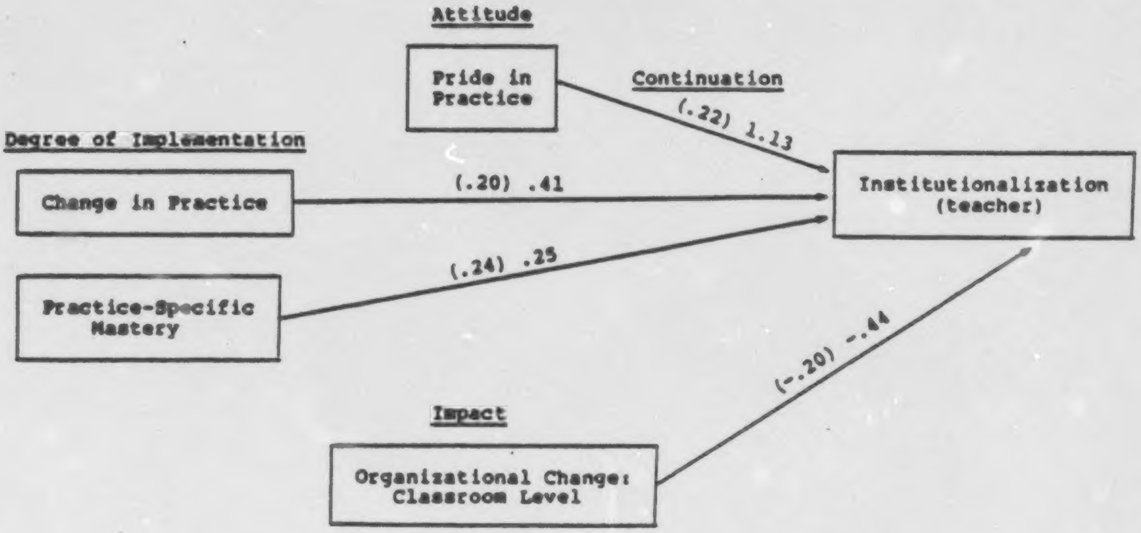
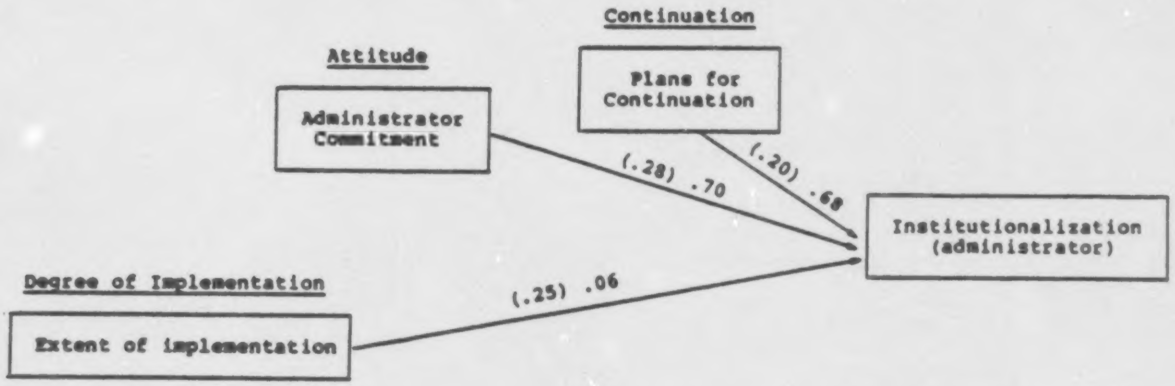


Figure 7
Predictions of Institutionalization (Administrator Perception)

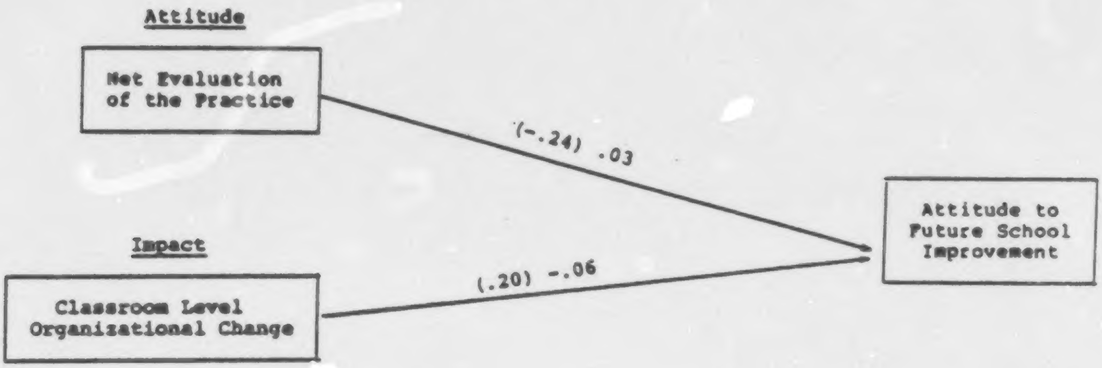


---

[36] The numbers between parentheses are standardized partial regression coefficients (betas) that tell how much levels of institutionalization would change with each unit change in the predictor when the influence of all the other predictors is controlled for. The unstandardized coefficients follow the parentheses.

We were not as successful in predicting attitudes to school improvement as we were with institutionalization. When all other outcomes were used as predictors of teacher attitudes to school improvement, not one reached significance. However, when we selected only "impact" and "attitude" variables as predictors, the picture is different. When both "degree of implementation" and "continuation" variables were ignored, the results were as shown in Figure 8 (Table 4.18).

Figure 8
Predictions of Attitude to Future School Improvement


Attitude
Net Evaluation of the Practice
(-.24) .03
Impact
Classroom Level Organizational Change
(.20) -.06
Attitude to Future School Improvement

This is a very weak set of associations, so our conclusions must be cautious. We are considering only attitude and impact variables, excluding degree of implementation and continuation/institutionalization variables (which, as we have seen, are rather important for institutionalization). The regression suggests that teachers with a positive balance of strengths/benefits over problems/weaknesses are more likely to say that the number of future school improvement efforts should be maintained, rather than increased; further, users who show more organizational change at the classroom level (a measure, as we noted before, of incomplete implementation), are more likely to say that school improvement efforts should be increased. (Table 4.18)

The safest conclusion from these analyses is that perhaps attitudes to school improvement can be influenced by an implementation that teachers regard positively, but we do not have very strong grounds for such a conclusion. We also should note that a similar sub-analysis carried out for administrators yielded nothing.

## The Distribution of Outcomes Across Federal Programs

In Volume I, we discussed the four dominant strategies and the underlying assumptions of the programs exemplifying these strategies that we studied. We also speculated about the differences we might find in the schools where the programs were being implemented, including the differences in outcomes (see Figure 1).

We noted at the beginning of this volume that our causal models, discussed in Volume III, suggest that influences other than program differences account for differences in outcomes. Although the program strategies vary widely, they do not in and of themselves cause different kinds of outcomes. Nor do they result in higher or lower scores on a particular outcome, when other variables are controlled for.

So program differences are not good predictor variables. However, there is some value in describing differences in outcomes by program, since that again enhances our picture of school improvement efforts. This section reviews the list of outcomes and shows how the programs performed. But, before the reader jumps to a "horse race" mode of thinking, we should say that of the 28 measures we examined, only 10 showed significant differences -- and we wre using the .05 level and a fairly relaxed test (the SNK contrast method). Our analyses tell us that, as far as outcomes are concerned, there usually are more differences within programs than between them. The reader also should remember that, on the average, obtained outcomes are rather positive. All the programs performed at a medium-to-medium/high level, averaged across all outcomes.

Before turning to our discussion of program differences, we should note that, when analyses were conducted, the NDN sites were divided into those designed or developed for use in Title I settings (designated as NDN Title I) and those that were not (NDN non-Title I). As we noted in Chapter III on practices, the Title I group is quite homogeneous in many ways (e.g., approach, content), whereas the Non-Title I group represents a wide variety of practices, much the same as the NDN as a whole. We break out the Title I sites here because there are some interesting differences, but this is in no way to suggest that such a separation should be made as a policy or in practice. The NDN "approach," with its elaborate system of external assistance and procedures for working with local sites, is common across all NDN practices, and we have no indication that it works differently for Title I practices, or any other NDN subset.

167

In the sections below, we discuss each outcome cluster, noting first which outcome variables showed no program differences. For the more interesting, robustly measured variables[37], we speculate about why these differences may have occurred.

## Degree of Implementation

Of the variables in this cluster, four showed significant program differences: change in practice, extent of implementation, and both practice mastery variables (practice-specific and practice-related). There were no program differences for fidelity.

For change in practice (a 0 to 3 scale) we found our "average" program showing a change score of 1.2, which means, roughly, going from "unacceptable" to "acceptable" on a typical component of the practice being implemented. We have two contrasting clusters. Users of the non-Title I NDN practices (mean = 0.7), and of BEH practices (mean = 0.7), made significantly smaller changes than those of state-administered (mean = 1.5), NDN Title I (mean = 1.5), and Title IV-C locally developed (mean = 1.8) practices.

Extent of implementation, which ranged on a 0 to 36 scale, averaged 18.4 in our sample, meaning roughly that a "typical" practice with 8 components was being implemented at a level slightly better than "acceptable." But some programs show more extensive implementation than others. Notably, NDN Title I users (mean = 22.5) and Title IV-C locally developed program users (mean = 20.2) show significantly more use than state-administered program users (mean = 14.6). We also see that non-Title I NDN users (mean = 17.7) have a significantly lower extent of implementation than those of NDN Title I practices.

Our practice mastery differences are a bit more complicated to report, since Levels of Use is not really an interval scale and so does not readily lend itself to averaging. Our analyses of variance using coded scores showed that users of Title IV-C local development practices had a significantly higher Level of Use for the developer's version (i.e., practice-specific mastery) than did users of other programs. For practice-related mastery (i.e., Level of Use of whatever components of the practice the user was implementing), we found Title IV-C users were at significantly higher levels than BEH practice users, with no other differences.

---

[37] We should note that the measures producing the most consistent differences between program strategies are our most robust. Elaboration, scaling, concurrent validation, item analyses and other steps to strengthen their properties were taken more intensively with measures of institutionalization, both practice mastery (Levels of Use) variables, and the Component Checklists from which the change in practice and extent of implementation variables were derived. It may well be that there are more between-program differences than we have found, but that weaknesses in the outcome measures (lopsided distributions, limited range, respondent bias) are masking them.

## Attitude Toward the Innovation

For this cluster of outcomes, we found no program differences for net evaluation of the practice, practice as a problem solution, or any of our commitment variables except as noted below. Only one-third of our sample said they had implementation difficulties, and this variable had a very small range (on a 0 to 3 scale, program means ranged from 0 to 0.7); yet there were significant program differences. BEH users said they had no problems (mean = 0.0), while IV-C users averaged 0.7. This is no surprise, since Title IV-C practices are typically more demanding and broader in scope than those used by the BEH sample.

The other significant program differences in this variable set was found in administrators' pride in the practice. We again see a discrepancy between BEH administrators, who were more likely to say that implementing the practice was "part of my job," and administrators of the NDN and Title IV-C samples, who say it was "something I am proud of." NDN Title I was at the top of the scale, a further indication that these practices seem to require, and get, organizational commitment.

## Impact

We found no program differences for student impact, or for organizational change at the school level. We did find differences for teacher rewards, the increase in professional satisfaction and recognition reported by our users. Here, on a 0 to 3 scale with an overall mean of 1.7, users of Title IV-C practices (mean = 2.2) reported significantly more rewards than those of NDN and state-administered practices (means = 1.7 for NDN non-Title I, 1.4 for NDN Title I and 1.5 for state-administered).

We also saw some differences in organizational change at the classroom level, which had a 0 to 3 scale and an overall mean of 1.0. Here, there were three distinctly different groups: BEH users (mean = 1.9) reported significantly more change than users of state-administered practices (mean = 1.2), which in turn had more change than NDN and Title IV-C users (NDN Title I = 0.8; NDN non-Title I = 1.0; Title IV-C = 0.6). We should note again that this variable appears to reflect "incomplete implementation." That is, when users reported little student impact, they reported more vaguely-descrbed classroom changes, such as "provides instructional approach," "flexibility," and "coordinated/organized curriculum." Whereas BEH users perform poorly on our student impact variable, they seem to substitute some minor classroom restructuring as an outcome of using the practice.

### Continuation/Institutionalization

In this outcome cluster, we found program differences on only two variables: expected continuation, as reported by administrators, and institutionalization as perceived by users. For the first, we found that most programs, except for NDN Title I, cluster around the scale point defined as "the practice will be around two years from now, with changes." Title I NDN administrators were more apt to project unqualified continuation, i.e., continuation without changes. This may well be a function of the continuing availability of Title I funds, and the likely presence of an eligible pupil population in the foreseeable future.

Differences on the institutionalization measure are interesting also. Throughout our discussion of outcomes, we have emphasized the importance of this measure as an indicator of long-term durability of the new practices. Recall that the items within this scale asked whether there were features supporting the new practice in regulations, curriculum incorporation, materials, in-service training, hiring and line-item budgeting.

We originally had less faith in teachers' rating of this variable, since they were less knowledgeable about the status of the program in the school budget and regulations. But, in examining program differences, we found that the ordering of the programs is almost precisely identical on the teacher and administrator scales. But only the users' perceptions show differences, with BEH practices having significantly lower levels of institutionalization than the others, and NDN Title I practices with higher levels.

### Attitude Towards School Improvement

In this cluster we saw no program differences. This is not surprising since, as we noted earlier, our measures of these variables were not particularly robust, and showed little range in responses.

### Summary: Program Differences

Table 63 summarizes the outcome differences we found across programs.

Table 63
Summary of Program Differences in Attained Outcomes

| | NDN | | | | |
|---|---|---|---|---|---|
| | Non-Title I | Title I | BEH | State-Administered | Title IV-C |
| Change in Practice | L | H | L | H | H |
| Extent of Implementation | M | H | M | L | H |
| Practice-Specific Mastery | M | M | M | M | H |
| Practice-Related Mastery | M | M | L | M | H |
| Implementation Difficulties | M | M | L | M | M |
| Pride in Practice | H | H | L | M | H |
| Teacher Rewards | M | M | M | M | H |
| Organizational Change: Classroom | L | L | H | M | L |
| Continuation | M | H | M | M | M |
| Institutionalization | M | H | L | M | M |

In the next chapter, we contrast our expectations for our sample of school improvement efforts with what we actually found. In doing so, we include a discussion of program differences. To avoid being repetitive, let us now merely note several trends indicated in Table 63.

- NDN Title I practices are notably robust through all the levels: teachers change a great deal and administrators make sure the practices will continue;
- Title IV-C practices are even more robust at the teacher level, but there is less attention to organizational continuity;
- BEH practices make only a small dent in schools, at best tinkering with the organizational aspects of the classroom; and

- NDN non-Title I and state-administered practices appear somewhere in between, neither robust nor trivial. Perhaps this is because both samples are quite heterogeneous, mixing a wide variety of practices whose outcomes may range so widely that their scores even out to "moderate" on the scale.

Given these generalizations about outcome differences between programs, we now turn to a summary of our learnings, where we discuss in detail what program and other differences seem to mean for school improvement.

# CHAPTER V: OUR LEARNINGS

In Volume I, and again at the beginning of this volume, we presented what we expected to find occurring in schools where improvement efforts were successfully underway. This volume has attempted to answer two questions:

- Were the efforts of our sample of 146 schools, that reportedly were engaged in efforts, in fact, successful?
- What factors were present, or had been present, at these sites that might have contributed to this success (or lack thereof)?

We have answered the first question quite clearly, by defining several "success" indicators and reporting their presence or absence. The second question is trickier. The findings reported here are largely descriptive; in only a few cases do they examine relationships. So we make no claims for causality, and can only suggest what might be contributing to success. Our individual and school-level improvement models reported in Volume III can be more definitive about causality.

As noted earlier, we expected to find some differences in our sample according to which federal program supported the particular improvement effort. We found few differences that significantly affected outcomes; instead, there were typically more differences within programs then between them. Here we discuss program differences where they contribute to understanding the dynamics of implementation in schools, most notably in the configurations of assistance and outcomes. Otherwise, we characterize our sample as a whole, learning what we can from widely diverse places where improvement efforts were underway.

## Success or Failure?

Before we describe the factors at play in our schools, we should characterize the outcomes of the efforts. Were they successful or not? Was anything really happening that was different than before? Were there benefits, and if so to whom?

The outcomes we measured ranged from use of the practices, to student, teacher and school benefits, to institutionalization. Our schools scored remarkably high on most outcomes. We found significant changes in classrooms from what teachers had been doing before implementation. We found a large degree of fidelity to the developer's version of the new practices. A large majority of our teachers reported benefits to students, as well as to their own professional growth. Only institutionalization -- the existence of procedures and regulations to ensure ongoing use of the practice -- was not high overall. This we attribute to the fact that these were largely classroom innovations. Although administrators and other support staff were often heavily involved, the attention was more on helping teachers master the practice and on making sure that everything was "go" at the time of implementation. Immediate needs are often all that can be met when resources are focused on implementation. It takes reflection, time and ongoing resources to make certain that such things as curriculum guides get rewritten, the practice becomes a line-item in the budget, and refresher training is given to teachers periodically. Support mechanisms are rarely in the spotlight when improvement efforts are undertaken, and so important administrative and organizational adjustments are often overlooked.

We purposely selected three seemingly quite different dissemination strategies and one development strategy -- all in an effort to see what works best for whom in what situations. We believed we would see different outcomes of the different strategies, and different causes for those outcomes. As usual, the real world is neither predictable nor so "black and white." In contrasting our predictions (from the beginning of this volume) and our findings for outcomes, we find:

- Change in practice was high, as we predicted, for all but the non-Title I NDN sites, and low, as predicted, for the BEH sites. Although we thought that having BEH materials would not demand that teachers depart greatly from what they were doing before, we also found this to be the case for NDN practices that were not developed for use in Title I schools.

- All programs showed moderately high fidelity to the practices as designed by the developer. This surprised us in the case of BEH practices, where we thought that lack of training and prescribed structure would give teachers a "do whatever you want" message, which usually results in widely different uses. We suspect now that the materials were so uncomplicated that not many variations in use were possible. We also underestimated fidelity for local development practices, which are based on the assumption that unique conditions exist at each site and practices should be developed specifically to meet those conditions. One might expect that this assumption would extend to the classrooms, where teachers would purposely adapt a school- or district-developed practice to meet their own students' needs. Apparently this did not happen widely, either because the teachers did not feel free to do so, or because the practices were already a "good fit." (Other data would lead us to argue the latter.)

- As we predicted, teachers using all programs noted impact on students although, still as predicted, BEH users reported this somewhat less frequently. This BEH finding is understandable, since use of a certain set of materials, often for short periods of time, could rarely be said to affect students significantly.

- Users of all practices reported experiencing rewards from their use. Teachers in Title IV-C local development sites reported the most rewards, which although unpredicted, is understandable since they may have been actively involved in molding and shaping the practices to meet their needs.

- We predicted high institutionalization for all progams except BEH where, we reasoned, materials without training and a "people" support structure would easily find their way to a dusty shelf. Both our findings from the BEH sample and our difficulties in finding a BEH sample confirmed this. What is more interesting is how the other program sites were different. The support structures purposely built into the other programs resulted in only moderate institutionalization. The exception is the Title I NDN sites where a solid commitment from administrators, as well as the anticipated continuation of Title I funds to support the practice, seems to have contributed to high levels of institutionalization.

So we see a high success rate for our school improvement efforts, with a few interesting differences between programs. Now some brief summaries of the people and places suggest some attitudes, behaviors and conditions that nurture such success.

## People: Keys to Success

What fueled the fire of these improvement efforts? Our answer is unqualified: people. We found people at all levels, from tutors through federal policymakers, actively engaged in making classrooms better places for students. Here we consider many of these roles, and how they worked together to make the innovative practices successful.

As our study got underway, we predicted that teachers involved in successful school improvement efforts would be motivated, committed, and active in using the new practices. This was indeed what we found. They took pride in what they were doing, and as noted earlier, reported many benefits to changing their classroom practice.

Building and district administrators worked hand in hand with teachers, equaling their commitment and engaging in a myriad of support activities. Individuals in another role, one we labeled "local facilitator," emerged as important contributors to teacher support in nearly half our sites. The local facilitators, often curriculum coordinators, federal program managers, or project directors, local facilitators were cheerleaders, stimulating commitment from teachers and administrators. They were linkers, scanning the environment for new and useful practices and introducing them into schools; and troubleshooters, solving problems and mustering resources so that schools and teachers could function smoothly. They were most often the champions and advocates of the new practice.

Finally, we have our external facilitators, helpers from outside the school districts who brought new practices and ideas for teachers to use in classrooms. These were formally funded for the NDN and state-administered programs; they were contracted individually for the Title IV-C development efforts. (There were none for our BEH sites.) These people most typically helped schools become aware of alternative practices, prepared teachers for use of the practices, supplied materials, and helped with the specific details of implementation.

We originally looked for contributors that were unique to each of the role groups: teachers, administrators, local and external facilitators. What we found instead was a set of assistance functions that needed to be assumed by someone in order for implementation to occur. Our sites varied in terms of who did what. Those without local facilitators often had more active principals and external facilitators; those with unengaged principals often relied on teachers and local facilitators. What we found was a constellation of actors taking on various functions to result in a fully supported effort.

Some combinations appeared to work better than others. For example, where local and external facilitators worked together, teachers made more substantial change in their classroom practice. The way these two role groups divided up the labor was interesting; for example, when both were present, external facilitators did fewer awareness and initiation activities and local facilitators did more teacher preparation, were more often responsible for supplying materials, and provided more ongoing help with implementation.

Certainly there are some functions that a particular role group plays out the best. For example, principals are best equipped to maintain a smoothly running school. Local faciitators, by virtue of their access to schools and expertise in the practice, can contribute most by monitoring use of the practice and giving teachers suggestions about how best to change what they are doing. External facilitators, particularly practice developers, can provide training. But our findings indicate that the configurations of assistance are endless, and for each situation, a unique combination of players can be called upon to supply all the necessary functions.

## The Innovative Practices

In Volume III, we note that none of the characteristics of the practices we examined -- e.g., complexity, prescriptiveness, implementation requirements -- had a direct influence on how successfully the practices were implemented. We did not find, for example, that the more complex a practice, the more difficult it was to use. What we did find was that the same practice may look quite different to two different teachers or sites, depending on where they are when they decide to implement. If teachers are accustomed to diagnostic/prescriptive teaching, a new reading curriculum using this approach will require much more minor change in practice than it would in a school where teachers use three reading groups and a basal reader. And depending on the amount of change required for a teacher, very different factors help make implementation successful.

This finding underscores the importance of our having a widely diverse sample of practices. Ours were practices which ranged in content emphasis, complexity, pedagogical approach, prescriptiveness, and an assortment of other attributes. The fact that we sampled such a wide range of practices makes us more confident in our understandings about the change process. No matter what the particular innovation is, it is the "fit" with the adopting environment that should dictate how implementation proceeds. The particulars are discussed in Volume III.

## The Local Settings

Finally, we should note that ours were not schools "programmed" for success due to community wealth or particularly innovative district staff. They were quite representative of American schools, with a wide range in sizes, geographic locations, and community types. Our practices were implemented at many different grade levels, and our respondents showed a wide range in age and experience. We are confident that these are not "special cases" in terms of demographics.

What is remarkable is the cohesiveness, cooperation, and cross-level responsiveness that was reported by all levels of respondents. These were places where the seeds of school improvement could take hold, for they were not torn by conflict, distracted by crisis management, or populated by isolates who "did their own thing." As our field study confirms, success was accompanied (since we cannot say "caused") by leadership at the school or district level, teachers who were willing to adopt new behaviors to benefit their students, and practices that were well-defined, effective, and whose use was supported by an infrastructure of "school-wise" experts. For relatively low resource expenditure, schools in all parts of the country were seeded with and nurtured successful improvement projects.

Our portrait of improving schools is complete. Although many questions still remain for secondary data analysis, we have some clear ideas about ingredients for success. In the next volume we put all these ingredients together to determine which have the most influence on selected outcomes. Additional volumes in this series enhance our understandings of the government structures built to encourage and support local efforts.

# REFERENCES

Bentzen, M. *Changing organizations: The magic feather principle.* New York, NY: McGraw-Hill, 1974.

Berman, P. and McLaughlin, M. *Federal programs supporting educational change. Vol. VIII: Implementing and sustaining innovations.* Santa Monica, CA: Rand Corporation, 1978.

Berman, P. and McLaughlin, M. *Federal programs supporting educational change. Vol. IV: The findings in review.* Santa Monica, CA: Rand Corporation, 1975.

Crandall, D.P., Emulation and replication: The unspoken covenants of school improvement. *Teacher Education and Special Education*. 1981 4(2), 13-22.

Datta, L.E. Changing times: The study of federal programs supporting educational change and the case for local problem-solving. *Teachers College Record*, 1981, 82(1), 111-116.

Fullan, M. *The meaning of educational change*. New York: Teachers College Press, and Toronto: Ontario Institute for the Study of Education (OISE) Press, 1982.

Hall, G. and Loucks, S. Teacher concerns as a basis for facilitating and personalizing staff development. *Teachers College Record*, 1978, 80(1), 36-53.

Hall, G., Loucks, S., Rutherford, W. and Newlove, B. Levels of use of the innovation: A framework for analyzing innovation adoption. *The Journal of Teacher Education*, 1975, 29(1), 52-56.

Havelock, R. Report from the Belmont task force on linking functions. In C. Cates and S. Ward (Eds.) *Dissemination and the improvement of practice: Cooperation and support in the school process*. San Francisco, CA: Far West Laboratory for Educational Research and Development, 1979.

Huberman, A.M. and Miles, M.B. *People, policies, and practices: Examining the chain of school improvement. Vol. IV: Innovation up close: A field study in twelve school settings*. Andover, MA: The NETWORK, Inc., 1982.

Leithwood, K.A. and Montgomery, D.S. The role of the elementary school principal in program improvement. *Review of Educational Research*, 1982, 52(3), 309-339.

Loucks, S. and Crandall, D. The practice profile: An all-purpose tool for program communication, staff development, evaluation, and implementation. Andover, MA: The NETWORK, Inc., 1982.

Loucks, S., Newlove, B., and Hall, G. Measuring levels of use of the innovation: A manual for trainers, interviewers and raters. Austin, TX: Research and Development Center for Teacher Education, the University of Texas, 1975.

Miles, M.B. and Huberman, A.M. The outcomes of school improvement efforts. Andover, MA: The NETWORK, Inc., 1982.

Schmuck, R.A. and Miles, M.B. (Eds). Organization development in schools. Palo Alto, CA: National Press Books, 1971.

Sieber, S.D. Towards a theory of role accumulation. American Sociological Review, 1974, 39(4), 567-579.

Yin, R.K. Changing urban bureaucracies: How new practices, become routinized. Santa Monica, CA: Rand Corporation, 1978.

# APPENDIX

## Tables of Variable Distributions

This Appendix is divided into parts according to Chapters and Sections in the text. Tables are numbered correspondingly, the first number indicating the chapter, and the second number indicating the sections (for Chapter I, the only chapter where sections are present). Tables are displayed in the order they are referred to in the text.

## TABLE OF CONTENTS

Page

### Chapter I

**Section 1** . . . . . . . . . . . . . . . . . . . . . . . . 1

Table 1.1.1. Teaching Experience of Teachers. . . . . . . 1
Table 1.1.2. Professional Meetings and Conferences Attended by Teachers . . . . . . . . . . . 1
Table 1.1.3. Courses Completed by Teachers. . . . . . . . 1
Table 1.1.4. Journals Read Regularly by Teachers. . . . . 2
Table 1.1.5. Training Sessions Attended by Teachers . . . 2
Table 1.1.6. Congruence of Practice with Teachers' Values . . . . . . . . . . . . . . . . . . . . 2
Table 1.1.7. Teachers' Descriptions of the Purposes of the Practice. . . . . . . . . . . . . . . 3
Table 1.1.8. Number of Problem-Solving Behaviors Reported by Teachers . . . . . . . . . . . 3
Table 1.1.9. Types of Problem-Solving Behaviors Reported by Teachers . . . . . . . . . . . 4
Table 1.1.10. Number of Evaluation Behaviors Reported by Teachers. . . . . . . . . . . . . . . . . 4
Table 1.1.11. Types of Evaluation Behaviors Reported by Teachers. . . . . . . . . . . . . . . . . 5

**Section 2** . . . . . . . . . . . . . . . . . . . . . . . . 6

Table 1.2.1. Implementing Administrator Experience. . . . 6
Table 1.2.2. Non-Implementing Administrator and Local Facilitator Experience . . . . . . . . 6
Table 1.2.3. Experience in Other Roles -- Local Facilitators . . . . . . . . . . . . . . 7
Table 1.2.4. Professional Activity of Administrators. . . 8
Table 1.2.5. Primary Motivation for Adopting a Particular Practice as Reported by Administrators, Local Facilitators and Teachers . . . . . . . . . . . . . . . . . . 9
Table 1.2.6. Advantages of Using the New Practice as Reported by Administrators, Local Facilitators, and Teachers . . . . . . . . . 10
Table 1.2.7. Sense of Ownership of the New Practice as Reported by Administrators, Local Facilitators and Teachers. . . . . . . 11
Table 1.2.8. Most Important Purposes of the New Practice as Reported by School Administrators and Teachers . . . . . . . . 12
Table 1.2.9. Personal Role of Administrators in Encouraging School Improvement. . . . . . 13

## TABLE OF CONTENTS (continued)

Page

Section 3. . . . . . . . . . . . . . . . . . . . . . . . . 14

Table 1.3.1. Highest Level of Education of External Facilitators . . . . . . . . . . . . . . . . . . 14
Table 1.3.2. Age of External Facilitators . . . . . . . . . 14
Table 1.3.3. Gender of External Facilitators. . . . . . . . 14
Table 1.3.4. Items Assessing Tolerance for Ambiguity of External Facilitators . . . . . . . . . . 15
Table 1.3.5. Host Organization of External Facilitators . . . . . . . . . . . . . . . . . 15
Table 1.3.6. Host Organization by External Facilitator Role Group . . . . . . . . . . . 16
Table 1.3.7. Number of Professional Personnel . . . . . . 16
Table 1.3.8. Number of Dissemination Personnel (Professional) . . . . . . . . . . . . . . . . 17
Table 1.3.9. Length of Time External Facilitator's Position Has Existed in Host Organization . . . . . . . . . . . . . . . . . 17
Table 1.3.10. Likelihood That Position Would Be Maintained . . . . . . . . . . . . . . . . . . 18
Table 1.3.11. Work Setting Advantages for External Facilitators . . . . . . . . . . . . . . . . . 18
Table 1.3.12. Work Setting Disadvantages for External Facilitators. . . . . . . . . . 19
Table 1.3.13. Size of Service Area of External Facilitators . . . . . . . . . . . . . . . . . 19
Table 1.3.14. Reasons for Changes in Plans of External Facilitators. . . . . . . . . . . . 20
Table 1.3.15. Sources of Assistance Reported by External Facilitators. . . . . . . . . . . . 20
Table 1.3.16. Nature of Assistance Received by External Facilitators. . . . . . . . . . . . 21
Table 1.3.17. Nature of Other Work Roles of External Facilitators. . . . . . . . . . . . 22
Table 1.3.18. Rewards of Multiple Roles of External Facilitators . . . . . . . . . . . . . . . . . 23
Table 1.3.19. Problems of Multiple Roles of External Facilitators . . . . . . . . . . . . . . . . . 24
Table 1.3.20. Autonomy of External Facilitators. . . . . . 24
Table 1.3.21. Length of Time External Facilitator Has Occupied Current Position. . . . . . . . 25
Table 1.3.22. How External Facilitator Arrived in Current Position . . . . . . . . . . . . . . 25
Table 1.3.23. Previous Job of External Facilitator . . . . 25
Table 1.3.24. Nature of Facilitator Services Provided in Last Job of External Facilitator . . . . . . . . . . . . . . . 26

TABLE OF CONTENTS (continued)

Page

Table 1.3.25. Number of Professional Journals Read by External Facilitators. . . . . . . . 26
Table 1.3.26. Number of Professional Organizations Joined by External Facilitators. . . . . . . 27
Table 1.3.27. Career Goals of External Facilitators. . . . 27
Table 1.3.28. Percent of Time Spent Dealing with Clients. . . . . . . . . . . . . . . . . . 28
Table 1.3.29. Percent of Time Spent on Ongoing Tasks . . . 28
Table 1.3.30. Client Assistance Activities Rated Most Important . . . . . . . . . . . . . . 29
Table 1.3.31. Client Assistance Activities Rated Most Enjoyed . . . . . . . . . . . . . . . 29
Table 1.3.32. Reasons for Local Site Adoption of New Practices Content Analysis. . . . . . 30
Table 1.3.33. Changes Made by Districts Adopting New Practices. . . . . . . . . . . . . . . 31
Table 1.3.34. District Characteristics Important in the Adoption or Development of New Practices, Reported by External Facilitators. . . . . . . . . . . 32
Table 1.3.35. Factors Influencing Work of External Facilitators in Local Sites. . . . . . . . 33
Table 1.3.36. District/Building Start by External Facilitators . . . . . . . . . . . . . . 34
Table 1.3.37. District/Building Start by External Facilitator Role Group . . . . . . . . . . 34
Table 1.3.38. How the External Facilitator Began Working with the Local Site. . . . . . . . 34
Table 1.3.39. Who Initiated Contact? . . . . . . . . . . . 35
Table 1.3.40. Types of Local Site Personnel Initiating Contact with External Facilitators . . . . . . . . . . . . . . . 35

TABLE OF CONTENTS (continued)

Page

Chapter II

Table 2.1. Cohesiveness of School as Reported by Faculty and Principals . . . . . . . . . . . . . 36
Table 2.2. Extent of Staff Rapport. . . . . . . . . . . . 37
Table 2.3. Responsiveness of Different Role Groups to Concerns of Faculty . . . . . . . . . . . . 37
Table 2.4. Degree of Autonomy Reported by Faculty . . . . 38
Table 2.5. Extent of Problem-Solving Effectiveness Reported by Faculty. . . . . . . . . . . . . 38
Table 2.6. Teachers' Report of Assistance From Teachers Within the School . . . . . . . . . . 39
Table 2.7. Existence of an Advocate of the Practice . . . 40
Table 2.8. Position of Primary Advocate Reported by Facilitators . . . . . . . . . . . . . . . . . 41
Table 2.9. Role of Primary Advocate, Reported by Facilitators . . . . . . . . . . . . . . . . . 42
Table 2.10. Number of Individuals or Groups Mentioned by Teachers who Endorsed the Practice . . . . . . . . . . . . . . . . . 43
Table 2.11. Individuals or Groups Mentioned by Teachers Who Endorsed the Practice . . . . . . 43
Table 2.12. Kinds of Endorsement Mentioned by Teachers . . . . . . . . . . . . . . . . . . . 44
Table 2.13. Number of Kinds of Support Mentioned by Administrators. . . . . . . . . . . . . . . 44
Table 2.14. Kinds of Support Mentioned by Administrators . . . . . . . . . . . . . . . . . 45
Table 2.15. Kinds of Support Given by Local School Districts, Reported by Facilitators. . . . . . 46
Table 2.16. Number of Individuals or Groups Who Opposed the Practice Mentioned by Administrators . . . . . . . . . . . . . . . . . 47
Table 2.17. Individuals or Groups Who Opposed the Practice Mentioned by Administrators . . . 47
Table 2.18. Kinds of Opposition Mentioned by Administrators . . . . . . . . . . . . . . . . . 48
Table 2.19. Number of School Improvement Activities Undertaken in the Previous Three Years as Reported by Administrators. . . . . . 48
Table 2.20. Comparison of Amount of Previous School Improvement Activity to That of Other Schools . . . . . . . . . . . . . . . 49
Table 2.21. Number of School Improvement Activities Currently Underway As Reported by Administrators . . . . . . . . . . 49
Table 2.22. Comparison of Amount of Current School Improvement Activity to That of Other Schools . . . . . . . . . . . . . . . . . 50

## TABLE OF CONTENTS (continued)

Page

Chapter III

Table 3.1. Distribution of Practices Among Programs by Purpose . . . . . . . . . . . . . . 51
Table 3.2. Distribution of Practices Among Programs by Pedagogical Approach. . . . . . . 52
Table 3.3 Practice Characteristic Correlation Matrix . . . . . . . . . . . . . . . . . . . 53

Chapter IV

Table 4.1. Numbers of Weaknesses or Problems With the Practice. . . . . . . . . . . . . . . 54
Table 4.2. Types of Weaknesses or Problems With the Practice . . . . . . . . . . . . . . . . . . . 54
Table 4.3. Number of Negative Effects (Implementation Difficulties) Reported by Teachers . . . . . . 55
Table 4.4. Types of Negative Effects (Implementation Difficulties) Reported by Teachers . . . . . . 55
Table 4.5. Reports of Practice as a Problem Solution. . . 55
Table 4.6. Kinds of Impact Practice Had on Students, Reported by Teachers . . . . . . . . 56
Table 4.7. Number of Student Benefits Mentioned by Teachers. . . . . . . . . . . . . . . . . . . 56
Table 4.8. Rewards Reported by Teachers . . . . . . . . . 56
Table 4.9. Number of Teacher Rewards Accruing from Practice. . . . . . . . . . . . . . . . . 57
Table 4.10. Number of Organizational Changes in the Classroom Resulting from Use of the Practice . . . . . . . . . . . . . . . . 57
Table 4.11. Number of Organizational Changes at the School Level Resulting from Use of the Practice. . . . . . . . . . . . . 58
Table 4.12. Percentage of Use of the Practice Among Teachers in the Building . . . . . . . . . . . 58
Table 4.13. Relationship of Percentage of Use and Years Since Adoption . . . . . . . . . . . 59
Table 4.14. General Attitude to School Improvement . . . . 59
Table 4.15. Desire for Future Improvement. . . . . . . . . 60
Table 4.16. Summary Table for Stepwise Multiple Regression Analysis, Institutionalization (Teacher Perception) . . . . . . . . . . . . . . 60
Table 4.17. Summary Table for Stepwise Multiple Regression Analysis, Institutionalization (Administrator Perception) . . . . . . . . . . 61
Table 4.18. Summary Table for Stepwise Multiple Regression Analysis, Attitude and Impact Predictors of Attitude Toward Future . . . . . . . . . . . . . . . . 61

# CHAPTER I

## Table 1.1.1
## Teaching Experience of Teachers
Data Source: User Questionnaire

| Years | Number of responses | Percent |
|---|---|---|
| 0 - 5 | 66 | 22.9% |
| 6 - 10 | 114 | 39.6 |
| 11 - 15 | 55 | 19.1 |
| 16 - 20 | 27 | 9.4 |
| 21 - 25 | 18 | 6.3 |
| 26 or more | 8 | 2.8 |
| N = | 288 | 100.1% |

Mean = 10.2
S.D. = 6.78

## Table 1.1.2
## Professional Meetings and Conferences Attended by Teachers
Data Source: User Questionnaire

| How Many | Number of responses | Percent |
|---|---|---|
| 0 | 25 | 9.3% |
| 1 - 5 | 143 | 53.0 |
| 6 - 10 | 64 | 23.7 |
| 11 - 15 | 19 | 7.0 |
| 16 or more | 19 | 7.0 |
| N = | 270 | 100.0% |

Mean = 6.3
S.D. = 7.04

## Table 1.1.3
## Courses Completed by Teachers
Data Source: User Questionnaire

| How Many | Number of responses | Percent |
|---|---|---|
| 0 | 84 | 32.3% |
| 1 - 5 | 127 | 48.8 |
| 6 - 10 | 38 | 14.6 |
| 11 - 15 | 7 | 2.7 |
| 16 or more | 4 | 1.5 |
| N = | 260 | 99.9% |

Mean = 3.1
S.D. = 4.12

### Table 1.1.4
### Journals Read Regularly by Teachers
Data Source: User Questionnaire

| How Many | Number of responses | Percent |
|---|---|---|
| 0 | 23 | 8.1% |
| 1 - 3 | 209 | 73.6 |
| 4 - 6 | 46 | 16.2 |
| 7 or more | 6 | 2.1 |
| N = | 284 | 100.0% |

Mean = 2.5
S.D. = 2.05

### Table 1.1.5
### Training Sessions Attended by Teachers
Data Source: User Questionnaire

| How Many | Number of responses | Percent |
|---|---|---|
| 0 | 24 | 8.7% |
| 1 - 3 | 133 | 48.2 |
| 4 - 6 | 72 | 26.1 |
| 7 - 9 | 9 | 3.3 |
| 10 or more | 38 | 13.8 |
| N = | 296 | 100.1% |

Mean = 4.5
S.D. = 5.08

### Table 1.1.6
### Congruence of Practice with Teachers' Values
Data Source: User Interview

Question asked: Is there anything about the practice that doesn't fit your philosophy, values, or style?

| | Number of responses | Percent |
|---|---|---|
| Definitely yes | 65 | 23.1% |
| Perhaps | 57 | 20.3 |
| Definitely no | 159 | 56.6 |
| | 281 | 100.0% |

188

## Table 1.1.7
## Teachers' Descriptions of the Purposes of the Practice
Data Source: User Questionnaire

| | Number of responses* | Percent |
|---|---|---|
| Foster positive student attitudes toward learning | 177 | 31.4 |
| Increase student achievement | 164 | 29.1 |
| Promote student personal development | 156 | 27.7% |
| Improve management procedures | 24 | 4.2 |
| Reduce the drop-out rate | 10 | 1.8 |
| Develop staff skills | 9 | 1.6 |
| Relieve student boredom | 7 | 1.2 |
| Other | 17 | 3.0 |
| | 564 | 100.0% |

*Since each teacher was allowed two selections, the total N of 282 is doubled.

## Table 1.1.8
## Number of Problem-Solving Behaviors Reported by Teachers
Data Source: User Interview

| | Number of responses | Percent |
|---|---|---|
| None | 152 | 51.4% |
| 1 | 109 | 36.8 |
| 2 | 28 | 9.5 |
| 3 | 5 | 1.7 |
| 4 | 1 | .3 |
| 5 | 1 | .3 |
| N = | 296 | 100.0% |

Mean = 0.6

## Table 1.1.9
## Types of Problem-Solving Behaviors Reported by Teachers
Data Source: User Interview
Content Analysis

N answering question = 144
N answering "no problem-solving behaviors" = 152
Total N = 296

| | Number of responses | Percent of total responses | Percent of N answering question |
|---|---|---|---|
| Modified approach or curriculum | 67 | 33.7% | 46.5% |
| Changed management or coordinated activities | 44 | 22.1 | 30.6 |
| Improved communication | 36 | 18.1 | 25.0 |
| Sought help from internal sources | 18 | 9.0 | 12.5 |
| Took training or otherwise upgraded staff skills | 16 | 8.0 | 11.1 |
| Sought help from external sources | 11 | 5.5 | 7.6 |
| Increased staff | 5 | 2.5 | 3.5 |
| Other | 2 | 1.0 | 1.4% |
| Total N of responses = | 199 | 99.9% | |

## Tables 1.1.10
## Number of Evaluation Behaviors Reported by Teachers
Data Source: User Interview

| | Number of responses | Percent |
|---|---|---|
| None | 50 | 17.8% |
| 1 | 96 | 34.2 |
| 2 | 84 | 29.9 |
| 3 | 38 | 13.5 |
| 4 or more | 13 | 4.6 |
| N = | 281 | 100.0% |

Mean = 1.5
S.D. = 1.09

## Table 1.1.11
## Types of Evaluation Behaviors Reported by Teachers
Data Source: User Interview
Content Analysis

N answering question = 231
N answering "no evaluation behaviors" = 50
Total N = 281

| | Number of responses | Percent of total responses | Percent of N answering question |
|---|---|---|---|
| Casual analysis | 96 | 22.4% | 41.6% |
| Testing students | 89 | 20.7 | 38.5 |
| Discussing with staff | 82 | 19.1 | 35.5 |
| Observing | 47 | 11.0 | 20.3 |
| Talking to students | 31 | 7.2 | 13.4 |
| Taking notes | 30 | 7.0 | 13.0 |
| Survey/assess/use questionnaire with staff | 27 | 6.3 | 11.7 |
| Using external evaluation | 11 | 2.6 | 4.8 |
| Discussing with parents | 7 | 1.6 | 3.0 |
| Surveying parents | 5 | 1.2 | 2.2 |
| Using assessment team | 4 | 0.9 | 1.7% |
| Total N of responses = | 429 | 100.0% | |

Table 1.2.1
Implementing Administrator Experience
Data Source: Administrator Site Questionnaire

| | Type of Administrator | | |
|---|---|---|---|
| Years as School Administrator | Principals | Superintendents | Both |
| N = | 102 | 78 | 180 |
| Mean = | 10.2 | 16.0 | 12.7 |
| S.D. = | 5.97 | 7.40 | 7.21 |

Table 1.2.2
Non-Implementing Administrator and Local Facilitator Experience
Data Sources: Non-Implementation Version of
Administrator Site Questionnaire and
Local Site External Agent Questionnaire

| | Type of Administrator | |
|---|---|---|
| Years in Present Position | Non-Implementing Principals and Superintendents | Local Facilitators |
| N = | 86 | 65 |
| Mean = | 6.2 | 5.4 |
| S.D. = | 5.82 | 4.40 |

## Table 1.2.3
## Experience in Other Roles -- Local Facilitators
### Data Source: Local Site External Agent Questionnaire

| Experience | With Experience | Mean | S.D. | N Without Experience |
|---|---|---|---|---|
| Number of years experience as a teacher | 69 | 10.7 | 7.34 | 9 |
| Number of years experience as a principal or assistant principal | 16 | 5.7 | 4.94 | 62 |
| Number of years experience as a central office administrator | 37 | 5.9 | 4.66 | 41 |
| Number of years experience in another capacity in education | 36 | 4.5 | 4.66 | 42 |

## Table 1.2.4
## Professional Activity of Administrators

Data Sources: Administrator Site Questionnaire, Non-Implementation Version of Administrator Site Questionnaire, and Local Site External Agent Questionnaire

| Question | Type of Administrator | | | | |
|---|---|---|---|---|---|
| During the past 2 years: | Implementing Administrators | | | Non-Implementing Administrators | Local Facilitators |
| | Principals | Superintendents | Both | | |
| a) How many professional organization meetings or conferences have you attended? | | | | | |
| N | 95 | 70 | 165 | 89 | 70 |
| Mean | 11.6 | 17.4 | 13.8 | 19.9 | 24.6 |
| S.D. | 9.29 | 15.34 | 12.57 | 20.11 | 27.43 |
| b) How many job-related college courses have you taken? | | | | | |
| N | 96 | 69 | 165 | 83 | 74 |
| Mean | 2.3 | 1.2 | 1.8 | 1.6 | 2.6 |
| S.D. | 4.42 | 2.32 | 3.72 | 2.91 | 3.19 |
| c) How many different professional magazines have you regularly read? | | | | | |
| N | 99 | 75 | 174 | 88 | 76 |
| Mean | 3.3 | 5.3 | 4.2 | 4.8 | 4.0 |
| S.D. | 2.05 | 3.28 | 2.82 | 5.26 | 2.21 |
| d) How many job-related training events have you attended? | | | | | |
| N | | | | 88 | 72 |
| Mean | Not Available | | | 7.6 | 9.3 |
| S.D. | | | | 11.37 | 9.90 |

### Table 1.2.5

### Primary Motivation for Adopting a Particular Practice as Reported by Administrators, Local Facilitators and Teachers

Data Sources: Administrator Site Questionnaire, Local Site External Agent Questionnaire, and User Questionnaire

| | Type of Respondent | | |
|---|---|---|---|
| | Implementing Administrators N = 155 | Local Facilitators N = 70 | Teachers N = 281 |
| Primary motivation: | | | |
| 1. LEGAL CONCERNS (e.g., some regulation, law, or court ruling motivated the adoption) | 7.1% | 5.7% | 4.6% |
| 2. ECONOMIC CONCERNS (e.g., desire for balanced budget, lower taxes, enlarged government funds coming to the district, etc.) | 6.4 | 0 | 6.4 |
| 3. POLITICAL CONCERNS (e.g., community pressure, new school board, new superintendent, etc.) | 3.9 | 1.4 | 5.0 |
| 4. EDUCATIONAL ENVIRONMENT CONCERNS (e.g., violence in school, high absenteeism, high drop-out rate, disciplinary problems, student-teacher relations, student attitudes toward learning) | 78.7 | 87.1 | 65.8 |
| 5. I DON'T KNOW. | 3.9 | 5.7 | 18.1 |

Table 1.2.6
Advantages of Using the New Practice
as Reported by Administrators, Local Facilitators, and Teachers
Data Sources: Administrator Site Questionnaire,
Local Site External Agent Questionnaire, and User Questionnaire

| | Type of Respondent | | |
|---|---|---|---|
| Question: | Implementing Administrator | Local Facilitator | Teacher |
| To what extent do you feel the advantages of using this practice outweigh the disadvantages? | | | |
| The advantages outweigh the disadvantages. | 86.1% | 89.5% | 76.1% |
| The advantages somewhat outweigh the disadvantages. | 10.0% | 6.6% | 15.5% |
| The advantages and disadvantages are about equal; they balance out. | 2.8% | 2.6% | 4.9% |
| The disadvantages somewhat outweigh the advantages. | 1.1% | 1.3% | 1.9% |
| The disadvantages outweigh the advantages. | 0.0% | 0.0% | 1.6% |
| N = | 180 | 76 | 309 |

## Table 1.2.7
## Sense of Ownership of the New Practice as Reported by Administrators, Local Facilitators and Teachers

Data Source: User, Administrator, and Local Site External Agent Questionnaires

| Respondents checked one answer to each question.<br>Questions | Type of Respondent<br>Implementing Administrator<br>Principal | <br><br>Superintendent | <br><br>Both | <br><br>Local Facilitator | <br><br>Teacher |
|---|---|---|---|---|---|
| a. WORKING WITH THIS NEW PRACTICE: | | | | | |
| solves problems I have been grappling with in schools | 88.5% | 95.7% | 91.5% | 90.8% | 88.1% |
| does not really address the problems I have encountered in schools | 11.5% | 4.3% | 8.5% | 9.2% | 11.9% |
| N = | 96 | 69 | 165 | 76 | 277 |
| b. WORKING WITH THIS NEW PRACTICE: | | | | | |
| is something I am proud of | 80.2% | 80.6% | 80.3% | 86.8% | 78.9% |
| is part of doing my job | 19.8% | 19.4% | 19.7% | 13.2% | 21.1% |
| N = | 101 | 72 | 173 | 76 | 298 |
| c. THE ATTEMPT TO CARRY OUT THIS NEW PRACTICE: | | | | | |
| could have been successful without my special contribution | 52.0% | 67.1% | 58.2% | 59.7% | 55.5% |
| could not have been successful without my special contribution | 48.0% | 32.9% | 41.8% | 40.3% | 44.5% |
| N = | 100 | 70 | 170 | 77 | 274 |
| d. WORKING WITH THIS NEW PRACTICE WAS SOMETHING I: | | | | | |
| wanted to do | 95.0% | 94.3% | 94.7% | 96.2% | 87.3% |
| felt I had to do | 5.0% | 5.7% | 5.3% | 3.8% | 12.7% |
| N = | 100 | 70 | 170 | 78 | 299 |

## Table 1.2.8
## Most Important Purposes of the New Practice as Reported by School Administrators and Teachers

Data Sources: Administrator, Local Facilitators, Local Site External Agent, and User Questionnaires

| Respondents checked two most important purposes. Values indicate the percent of total checks for each purpose. | Type of Respondent | | | | |
|---|---|---|---|---|---|
| | Implementing Administrators | | | | |
| | Principals | Superintendents | Both | Local Facilitators | Teachers |
| Total number of respondents | 101 | 74 | 175 | 78 | 318 |
| Total number of checks | 196 | 144 | 340 | 150 | 605 |
| Purposes: | | | | | |
| 1. Promote student personal development | 26.5% | 30.5% | 28.2% | 18.0% | 27.8% |
| 2. Increase student achievement | 25.5 | 25.7 | 25.6 | 30.0 | 28.9 |
| 3. Foster positive student attitudes toward learning | 32.6 | 27.8 | 30.6 | 28.7 | 30.7 |
| 4. Develop staff skills | 8.2 | 9.0 | 8.5 | 7.3 | 1.8 |
| 5. Relieve student boredom | 1.0 | 1.4 | 1.2 | 1.3 | 1.1 |
| 6. Improve management procedures | 1.5 | 1.4 | 1.5 | 4.0 | 4.3 |
| 7. Reduce the drop-out rate | 2.0 | 2.1 | 2.1 | 6.0 | 2.0 |
| 8. Other | 2.6 | 2.1 | 2.4 | 4.7 | 3.3 |

Table 1.2.9
Personal Role of Administrators in Encouraging School Improvement
Data Sources: Administrator Site Questionnaire and
Non-Implementation Version of Administrator Site Questionnaire
Total N answering question = 283

| | Number of responses | Percent of N answering question |
|---|---|---|
| Engaging in internal communication | 150 | 53% |
| Advocating and encouraging new approaches | 99 | 35 |
| Identifying problems and making needs assessments | 96 | 34 |
| Helping teachers to implement new practices | 91 | 32 |
| Setting goals and priorities | 76 | 27 |
| Helping others to set goals and priorities | 76 | 27 |
| Providing support and incentive for staff | 76 | 27 |
| Engaging in external communication | 62 | 22 |
| Encouraging others to communicate | 45 | 16 |
| Arranging and providing for staff | 34 | 12 |
| Assessing staff capability | 23 | 8 |
| Other | 48 | 17% |
| Total N of responses | 876 | |

## Table 1.3.1
## Highest Level of Education of External Facilitators
Data Source: External Agent General Questionnaire

| | Number of responses | Percent |
|---|---|---|
| High school degree | 1 | 1.2% |
| B.A. degree | 0 | 0.0 |
| B.A. degree and graduate units | 14 | 16.5 |
| Master's degree | 11 | 12.8 |
| Master's degree and additional graduate credit | 30 | 35.3 |
| All but dissertation | 6 | 7.1 |
| Advanced specialist or other degree | 6 | 7.1 |
| Doctorate | 17 | 20.0 |
| N = | 85 | 100.0% |

## Table 1.3.2
## Age of External Facilitators
Data Source: External Agent Demographic Record Card

| | Number of responses | Percent |
|---|---|---|
| Under 25 | 0 | 0.0% |
| 25 - 39 | 38 | 39.6 |
| 40 - 59 | 55 | 57.3 |
| Over 60 | 3 | 3.1 |
| N = | 96 | 100.0% |

## Table 1.3.3
## Gender of External Facilitators
Data Source: External Agent Demographic Record Card

| | Number of responses | Percent |
|---|---|---|
| Female | 53 | 54.9% |
| Male | 43 | 44.8 |
| N = | 96 | 100.0% |

### Table 1.3.4
### Items Assessing Tolerance for Ambiguity of External Facilitators
### Data Source: External Agent General Questionnaire

| Item | Strongly agree = 1 | Agree = 2 | Disagree = 3 | Strongly disagree = 4 | Mean | |
|---|---|---|---|---|---|---|
| a. I like situations where the guidelines are not spelled out. | 13 | 24 | 43 | 6 | 2.5 | N = 86 |
| b. I am uncomfortable when people make vague requests of me. | 17 | 36 | 25 | 8 | 2.3 | N = 86 |

### Table 1.3.5
### Host Organization of External Facilitators
### Data Source: External Agent Demographic Record Card

| | Number of responses | Percent |
|---|---|---|
| Local school district | 40 | 42.6% |
| Intermediate unit | 24 | 25.5 |
| Private firm | 14 | 14.9 |
| State education agency | 7 | 7.4 |
| College/university | 6 | 6.4 |
| Other | 3 | 3.2 |
| N = | 94 | 100.0% |

### Table 1.3.6
### Host Organization by External Facilitator Role Group
Data Source: External Agent Demographic Record Card

| | LEA | IU | Private Firm | SEA | Univ./ College | Other | = 91 |
|---|---|---|---|---|---|---|---|
| NDN SFs | 0 | 6 | 5 | 4 | 0 | 0 | = 15 |
| NDN D/Ds | 14 | 6 | 7 | 0 | 2 | 0 | = 29 |
| Title I D/Ds | 18 | 3 | 0 | 0 | 1 | 0 | = 22 |
| State-Admin. Developers | 10 | 7 | 0 | 0 | 0 | 0 | = 17 |
| Title IV-C | 1 | 0 | 2 | 3 | 3 | 3 | = 12 |
| N = | 39 | 22 | 14 | 7 | 7 | 2 | = 91 respondents |

### Table 1.3.7
### Number of Professional Personnel
Data Source: External Agent Demographic Record Card

| | Number of responses | Percent |
|---|---|---|
| 10 or under | 11 | 14.7% |
| 11 - 50 | 17 | 22.7 |
| 51 - 100 | 13 | 17.3 |
| 101 - 200 | 13 | 17.3 |
| 201 - 300 | 6 | 8.0 |
| 301 - 1000 | 5 | 6.7 |
| More than 1000 | 10 | 13.3 |
| N = | 75 | 100.0% |

Mean = 211.9 (from original distribution)
Median = between 70 and 100 (from original distribution)

## Table 1.3.8
## Number of Dissemination Personnel (Professional)
Data Source: External Agent Demographic Record Card

| | Number of responses | Percent |
|---|---|---|
| 0 | 1 | 1.2% |
| 1 | 10 | 12.0 |
| 2 | 15 | 18.1 |
| 3 | 6 | 7.2 |
| 4 | 6 | 7.2 |
| 5 | 11 | 13.3 |
| 6 | 5 | 6.0 |
| 7 | 3 | 3.6 |
| 8 | 2 | 2.4 |
| 10 | 2 | 2.4 |
| 11 | 6 | 7.2 |
| 12 | 5 | 6.0 |
| 20 | 2 | 2.4 |
| 30 | 6 | 7.2 |
| 40 | 2 | 2.4 |
| 50 | 1 | 1.2 |
| N = | 83 | 100.0% |

Mean = 8.4
Median = between 4 and 5

## Table 1.3.9
## Length of Time External Facilitator's Position Has Existed in Host Organization
Data Source: External Agent General Questionnaire

| | Number of responses | Percent |
|---|---|---|
| 1 year | 5 | 6.1% |
| 2 | 8 | 9.5 |
| 3 | 14 | 16.8 |
| 4 | 6 | 7.3 |
| 5 | 5 | 6.1 |
| 6 | 12 | 14.4 |
| 7 | 4 | 4.8 |
| 8 | 8 | 9.5 |
| 9 | 4 | 4.8 |
| 10 | 4 | 4.8 |
| 11 | 1 | 1.2 |
| 12 | 1 | 1.2 |
| 13 | 5 | 6.1 |
| 14 | 3 | 3.7 |
| 15 years | 3 | 3.7 |
| N = | 83 | 100.0% |

Mean = 6.4
S.D. = 3.98

## Table 1.3.10
## Likelihood That Position Would Be Maintained
Data Source: External Agent General Questionnaire

| | Number of responses | Percent |
|---|---|---|
| Yes | 52 | 75.4% |
| No | 13 | 18.8 |
| Don't Know | 4 | 5.8 |
| N = | 69 | 100.0% |

## Table 1.3.11
## Work Setting Advantages for External Facilitators
Data Source: External Agent General Interview
Content Analysis

N answering question = 83
N answering "no advantages" = 5
Total N = 88

| | Number of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Resources | 28 | 14.2% | 33.7% |
| Space | 26 | 13.1 | 31.3 |
| Ease of access to others in own organization | 25 | 12.6 | 30.1 |
| Type of work of host organization helpful | 19 | 9.6 | 22.9 |
| Ease of access to clients | 18 | 9.1 | 21.7 |
| Nature/practices of host organization | 18 | 9.1 | 21.7 |
| Staff | 15 | 7.6 | 18.1 |
| Ease of access to other organizations | 13 | 6.6 | 15.7 |
| Reputation of host organization helpful | 13 | 6.6 | 15.7 |
| Provides support (general) | 7 | 3.5 | 8.4 |
| Professional development | 7 | 3.5 | 8.4 |
| Provides variety/flexibility | 5 | 2.5 | 6.0 |
| Funding | 3 | 1.5 | 3.6 |
| Other | 1 | 0.5 | 1.2% |
| Total N of responses = | 198 | 100.0% | |

### Table 1.3.12

### Work Setting Disadvantages for External Facilitators

Data Source: External Agent General Interview
Content Analysis

N answering question = 55
N answering "no disadvantages" = 34
Total N = 89

| | Number of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Lack of space | 15 | 27.3% | 27.3% |
| Lack of access to clients | 12 | 21.8 | 21.8 |
| Reputation of host organization | 7 | 12.8 | 12.8 |
| Lack of funding | 4 | 7.3 | 7.3 |
| Nature/practices of host organization | 4 | 7.3 | 7.3 |
| Lack of staff | 3 | 5.5 | 5.5 |
| Lacks personal development | 2 | 3.6 | 3.6 |
| Lack of resources | 1 | 1.8 | 1.8 |
| Lack of access to others in own organization | 1 | 1.8 | 1.8 |
| Lack of access to other organizations | 1 | 1.8 | 1.8 |
| Lack of support | 1 | 1.8 | 1.8 |
| Lack of professional development | 1 | 1.8 | 1.8 |
| Lacks variety/flexibility | 1 | 1.8 | 1.8 |
| Type of work of host organization | 0 | 0.0 | 0.0 |
| Other | 2 | 3.6 | 3.6 |
| Total N of responses = | 55 | 100.0% | |

### Table 1.3.13

### Size of Service Area of External Facilitators

Data Source: External Agent Demographic Record Card

| | Number of responses | Percent |
|---|---|---|
| County/region of state | 10 | 10.7% |
| State/region | 41 | 44.1 |
| USA | 42 | 45.2 |
| N = | 93 | 100.0% |

### Table 1.3.14
### Reasons for Changes in Plans of External Facilitators
Data Source: External Agent General Questionnaire

| | Never = 1 | Once = 2 | Two or three times = 3 | Four or more times = 4 | Mean | |
|---|---|---|---|---|---|---|
| Weather | 28 | 18 | 26 | 12 | 2.3 | N = 84 |
| Transportation | 52 | 11 | 14 | 6 | 1.7 | N = 83 |
| Geographical location of a school site | 66 | 8 | 6 | 4 | 1.4 | N = 84 |

### Table 1.3.15
### Sources of Assistance Reported by External Facilitators
Data Source: External Agent General Interview Content Analysis

N answering question = 84
N answering "received no assistance" = 6
Total N = 90

| | Number of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Previous experience | 28 | 12.5% | 33.3% |
| State education agency | 26 | 11.6 | 30.9 |
| Informal comm./colleagues | 21 | 9.4 | 25.0 |
| Learning by Doing | 21 | 9.4 | 25.0 |
| NDN technical assistance base | 19 | 8.5 | 22.6 |
| NDN conference | 17 | 7.6 | 20.2 |
| Other conference | 15 | 6.7 | 17.8 |
| Other consultants | 15 | 6.7 | 17.8 |
| Project staff | 12 | 5.3 | 14.3 |
| USOE | 12 | 5.3 | 14.3 |
| Project director | 11 | 4.9 | 13.1 |
| Higher education/private training institute | 9 | 4.0 | 10.7 |
| CEDaR/labs/centers/consultants | 8 | 3.6 | 9.5 |
| ERIC/FWL/other publishers | 4 | 1.8 | 4.7 |
| Other | 6 | 2.7 | 7.1% |
| Total N of responses = | 224 | 100.0% | |

### Table 1.3.16
### Nature of Assistance Received by External Facilitators
Data Source: External Agent General Interview
Content Analysis

N answering question = 84
N answering "received no assistance" = 6
Total N = 90

| | Number of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Advice, answered questions | 45 | 20.9% | 54.2% |
| Training | 33 | 15.3 | 39.7 |
| Evaluation | 21 | 9.8 | 25.3 |
| Project exhibits materials | 21 | 9.8 | 25.3 |
| Dissemination | 18 | 8.4 | 21.7 |
| Awareness presentations | 12 | 5.6 | 14.4 |
| Contract application writing | 12 | 5.6 | 14.4 |
| Printed information | 10 | 4.7 | 12.1 |
| Classes/courses | 10 | 4.7 | 12.1 |
| Financial aid | 5 | 2.3 | 6.0 |
| Support (general, moral) | 5 | 2.3 | 6.0 |
| Computer assistance | 1 | 0.4 | 1.2 |
| Other assistance | 22 | 10.2 | 26.5% |
| Total N of responses = | 215 | 100.0% | |

## Table 1.3.17
## Nature of Other Work Roles of External Facilitators
Data Source: External Agent General Questionnaire
Content Analysis

N answering question = 57
N with no other jobs = 30
Total N = 87

| | Number of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Administration/supervision/ management | 36 | 29.3% | 63.2% |
| College/university teaching | 14 | 11.4 | 24.6 |
| Staff on other project/ grant/contract | 13 | 10.6 | 22.8 |
| Paperwork/proposal writing | 13 | 10.6 | 22.8 |
| Consulting/technical assistance | 10 | 8.1 | 17.5 |
| Training (pre-service, in-service) | 7 | 5.7 | 12.3 |
| Project/product/materials development | 6 | 4.9 | 10.5 |
| Monitoring/evaluation assistance | 6 | 4.9 | 10.5 |
| Research project | 5 | 4.1 | 8.8 |
| Communicate with external audiences | 4 | 3.2 | 7.0 |
| Information exchange | 4 | 3.2 | 7.0 |
| Teaching children | 2 | 1.6 | 3.5 |
| Counseling/therapy | 2 | 1.6 | 3.5 |
| Other | 1 | 0.8 | 1.8% |
| Total N of responses = | 123 | 100.0% | |

### Table 1.3.18
### Rewards of Multiple Roles of External Facilitators
Data Source: External Agent General Interview
Content Analysis

N answering question = 56
answering "no rewards" or "don't know" = 2
Total N = 58

| | Number of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Roles complement/interrelate | 20 | 19.4% | 35.7% |
| Diversity/variety (of roles) | 18 | 17.5 | 32.1 |
| Benefits to others | 18 | 17.5 | 32.1 |
| Self-development | 16 | 15.5 | 28.6 |
| Credibility/leverage | 8 | 7.8 | 14.3 |
| Get to work directly with schools | 7 | 6.8 | 12.5 |
| Other benefits to self | 6 | 5.8 | 10.7 |
| Communication | 5 | 4.8 | 8.9 |
| Able to continue to teach children | 3 | 2.9 | 5.4 |
| Travel opportunities | 1 | 1.0 | 1.8 |
| Professional development | 1 | 1.0 | 1.8 |
| Money | 0 | 0.0 | 0.0% |
| Total N of responses = | 103 | 100.0% | |

## Table 1.3.19
## Problems of Multiple Roles of External Facilitators
Data Source: External Agent General Interview
Content Analysis

N answering question = 37
N answering "no problems" = 21
Total N = 58

| | Number of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Time constraints | 23 | 50.0% | 62.2% |
| Self-management | 8 | 17.4 | 21.6 |
| Conflict (everyone wants 100%) | 6 | 13.1 | 16.2 |
| Difficult to keep current professional development | 3 | 6.5 | 8.1 |
| Does not allow for any social life | 2 | 4.3 | 5.4 |
| Interpersonal conflict/friction | 2 | 4.3 | 5.4 |
| Must sacrifice depth, specialization | 1 | 2.2 | 5.4 |
| Other | 1 | 2.2 | 2.7 |
| No self-development opportunity | 0 | 0.0 | 0.0 |
| Total N of responses = | 46 | 100.0% | |

## Table 1.3.20
## Autonomy of External Facilitators
Data Source: External Agent General Questionnaire

The way I carry out my job is primarily determined by:

| | Number of responses | Percent |
|---|---|---|
| Me alone | 25 | 28.4% |
| My co-workers and myself | 32 | 36.4 |
| My project officer and myself | 9 | 10.2 |
| My project director (supervisor) and myself | 22 | 25.0 |
| My project director | 0 | 0.0 |
| My project officer | 0 | 0.0 |
| N = | 88 | 100.0% |

210

### Table 1.3.21
### Length of Time External Facilitator Has Occupied Current Position
Data Source: External Agent Demographic Record Card

| | Number of responses | Percent |
|---|---|---|
| Less than 1 year | 1 | 1.1% |
| 1 - 2 years | 29 | 31.9 |
| 3 - 4 years | 22 | 24.2 |
| 5 - 7 years | 25 | 27.5 |
| 8 - 9 years | 9 | 9.9 |
| More than 10 years | 5 | 5.5 |
| N = | 91 | 100.0% |

### Table 1.3.22
### How External Facilitator Arrived in Current Position
Data Source: External Agent Demographic Record Card

| | Number of responses | Percent |
|---|---|---|
| From inside the host organization | 53 | 51.6% |
| From outside the host organization | 33 | 38.4 |
| N = | 86 | 100.0% |

### Table 1.3.23
### Previous Job of External Facilitator
Data Source: External Agent General Interview

| | Number of responses | Percent |
|---|---|---|
| Teacher | 30 | 33.3% |
| Administrator | 38 | 42.2 |
| Content specialist | 14 | 15.6 |
| Primary external agent | 6 | 6.7 |
| Non-education | 2 | 2.2 |
| N = | 90 | 100.0% |

### Table 1.3.24
### Nature of Facilitator Services Provided in Last Job of External Facilitator
Data Source: External Agent General Interview
Content Analysis

N answering question = 73

| | Number of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Developed curriculum | 24 | 17.4% | 32.8% |
| Trained teachers | 24 | 17.4 | 32.8 |
| Disseminated information | 21 | 15.2 | 28.7 |
| Program selection assistance | 12 | 8.7 | 16.4 |
| Assisted implementation | 12 | 8.7 | 16.4 |
| Demonstrated product | 10 | 7.2 | 13.7 |
| Provided consultation/ technical assistance | 10 | 7.2 | 13.7 |
| Monitoring/evaluation assistance | 7 | 5.1 | 9.0 |
| Adapted/adopted program | 7 | 5.1 | 9.5 |
| Developed materials | 6 | 4.4 | 8.2 |
| Worked with students directly | 4 | 2.9 | 4.3 |
| Other | 1 | 0.7 | 1.4% |
| Total N of responses = | 138 | 100.0% | |

### Table 1.3.25
### Number of Professional Journals Read by External Facilitators
Data Source: External Agent General Questionnaire

| | Number of responses | Percent |
|---|---|---|
| 0 | 10 | 13.3% |
| 1 | 8 | 10.7 |
| 2 | 15 | 20.0 |
| 3 | 19 | 25.3 |
| 4 | 10 | 13.3 |
| 5+ | 13 | 17.3 |
| N = | 75 | 99.9% |

Mean = 2.9
S.D. = 2.01

Table 1.3.26
Number of Professional Organizations Joined
by External Facilitators
Data Source: External Agent General Questionnaire

| | Number of responses | Percent |
|---|---|---|
| 0 | 9 | 12.3% |
| 1 | 5 | 6.8 |
| 2 | 20 | 27.4 |
| 3 | 14 | 19.2 |
| 4 | 10 | 13.7 |
| 5 | 9 | 12.3 |
| 6+ | 6 | 8.2 |
| N = | 73 | 99.9% |

Mean = 2.9
S.D. = 1.94

Table 1.3.27
Career Goals of External Facilitators
Data Source: External Agent General Interview
Content Analysis

N answering question = 82
N answering "don't know" = 8
Total N = 90

| | Number of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Continue in present position | 35 | 22.6% | 42.7% |
| Develop programs | 25 | 16.1 | 30.5 |
| Job outside education | 13 | 8.4 | 15.9 |
| Retirement | 11 | 7.1 | 13.4 |
| Advanced degree | 10 | 6.4 | 12.2 |
| Other teaching | 9 | 5.8 | 11.0 |
| Local school district administration | 9 | 5.8 | 11.0 |
| Other administration | 9 | 5.8 | 11.0 |
| Service schools in some capacity | 7 | 4.5 | 8.5 |
| Start own business | 6 | 3.9 | 7.3 |
| Continue to work on school improvement | 6 | 3.9 | 7.3 |
| Local school district teaching | 4 | 2.6 | 4.9 |
| Continue to disseminate programs | 4 | 2.6 | 4.9 |
| Continue as change agents | 4 | 2.6 | 4.9 |
| Promotion in same organization | 3 | 1.9 | 3.7 |
| Total N of responses = | 155 | 100.0% | |

### Table 1.3.28

### Percent of Time Spent Dealing with Clients

Data Source: External Agent General Questionnaire

| | Number of responses | Percent |
|---|---|---|
| 2% | 1 | 1.2% |
| 10% | 4 | 4.7 |
| 20% | 3 | 3.5 |
| 25% | 7 | 8.1 |
| 30% | 6 | 7.0 |
| 35% | 1 | 1.2 |
| 40% | 12 | 14.0 |
| 45% | 1 | 1.2 |
| 50% | 13 | 15.1 |
| 55% | 1 | 1.2 |
| 60% | 10 | 11.6 |
| 65% | 4 | 4.7 |
| 70% | 6 | 7.0 |
| 75% | 8 | 9.3 |
| 80% | 7 | 8.1 |
| 90% | 2 | 2.3 |
| N = | 86 | 100.0% |

Mean = 50.5%
S.D. = 21.26
Median = 50.6%

### Table 1.3.29

### Percent of Time Spent on Ongoing Tasks

Data Source: External Agent General Questionnaire

| | Number of responses | Percent |
|---|---|---|
| 10% | 2 | 2.3% |
| 20% | 6 | 7.0 |
| 25% | 9 | 10.5 |
| 30% | 6 | 7.0 |
| 35% | 4 | 4.7 |
| 40% | 10 | 11.6 |
| 45% | 1 | 1.2 |
| 50% | 13 | 15.1 |
| 55% | 1 | 1.2 |
| 60% | 12 | 14.0 |
| 65% | 1 | 1.2 |
| 70% | 6 | 7.0 |
| 75% | 7 | 8.1 |
| 80% | 3 | 3.5 |
| 90% | 4 | 4.7 |
| 98% | 1 | 1.2 |
| N = | 86 | 100.0% |

Mean = 49.6%
S.D. = 21.19
Median = 49.4%

## Table 1.3.30
## Client Assistance Activities Rated Most Important
Data Source: External Agent General Questionnaire

| | Number of Responses | | | |
|---|---|---|---|---|
| | Rated #1 N = 83 | Rated #2 N = 80 | | Total number of responses |
| Training the users (Item 3b) | 13 | 6 | = | 19 |
| Seeking commitment from School administrators (Item 2a) | 10 | 7 | = | 17 |
| Seeking commitment from teachers (Item 2b) | 4 | 12 | = | 16 |

## Table 1.3.31
## Client Assistance Activities Rated Most Enjoyed
Data Source: External Agent General Questionnaire

| | Number of Responses | | | |
|---|---|---|---|---|
| | Rated #1 N = 84 | Rated #2 N = 82 | | Total number of responses |
| Training the users (Item 3b) | 30 | 9 | = | 39 |
| Arranging or participating in awareness conferences (Item 1a) | 18 | 14 | = | 32 |
| Providing technical assistance or follow-up training (Item 4b) | 4 | 14 | = | 18 |

## Table 1.3.32
## Reasons for Local Site Adoption of New Practices Content Analysis
## Data Sources: External Agent Site-Specific Interview and Local Site External Agent Interview

### Items Related to Need

| | External Facilitator (N = 116 cases) | | Local Facilitator (N = 77 respondents) | |
|---|---|---|---|---|
| | Number of responses | Percent of total number of responses | Number of responses | Percent of total number of responses |
| Congruence with site (in general) needs | 43 | 31.4% | 21 | 29.2 |
| Teacher saw need | 29 | 21.2 | 11 | 15.3 |
| Solves special student needs | 26 | 19.0 | 11 | 15.3 |
| Superintendent/administrator saw need | 16 | 11.7 | 8 | 11.1 |
| Low test scores/achievement | 14 | 10.2 | 2 | 2.8 |
| Solves district problem (general) | 5 | 3.6 | 15 | 20.8 |
| Solves staff needs (methods/practices) | 4 | 2.9 | 4 | 5.6 |
| Total N of responses = | 137 | 100.0% | 72 | 100.1% |

### Items Not Related to Need

| | External Facilitator (N = 116 cases) | | Local Facilitator (N = 77 respondents) | |
|---|---|---|---|---|
| | Number of responses | Percent of total number of responses | Number of responses | Percent of total number of responses |
| Interest in program content/materials | 39 | 38.2% | 14 | 46.7% |
| Mandated by district (to building) | 12 | 11.8% | 4 | 13.3% |
| Single individual wants to try | 10 | 9.8% | 7 | 23.3% |
| Price (inexpensive) | 10 | 9.8% | 2 | 6.7% |
| General interest in being innovative | 7 | 6.9% | 2 | 6.7% |
| Program validated | 3 | 2.9% | 1 | 3.3% |
| Mandated/required by statute | 3 | 2.9% | 0 | 0.0 |
| Other | 18 | 17.6% | 0 | 0.0 |
| Total N of responses = | 102 | 99.9% | 30 | 100.0% |

## Table 1.3.33
## Changes Made by Districts Adopting New Practices
## Data Source: External Agent Site-Specific Interview Content Analysis

N answering question = 100 cases
N answering "don't know" = 19
N answering "no changes" = 11
Total N of cases = 130

| | Number of responses | Percent of total N of responses | Percent of N of cases answering question |
|---|---|---|---|
| Manage/coordinate (administrative) | 32 | 16.7% | 32.0% |
| Teacher plan/schedule/prepare | 29 | 15.1 | 29.0 |
| Follow programmed general methodology instruction (content) | 25 | 13.0 | 25.0 |
| Resources | 23 | 12.0 | 23.0 |
| Attitudes/values | 20 | 10.4 | 20.0 |
| Personnel/staff hired/reorganized | 16 | 8.3 | 16.0 |
| Use specified materials | 10 | 5.2 | 10.0 |
| Testing/screening | 10 | 5.2 | 10.0 |
| Training/in-servicing | 7 | 3.7 | 7.0 |
| Communicate with external audiences | 6 | 3.1 | 6.0 |
| Communicate with staff | 6 | 3.1 | 6.0 |
| Follow specified methodology sequences (process) | 4 | 2.1 | 4.0 |
| Develop student-staff relationships | 1 | 0.5 | 1.0 |
| Other | 3 | [illegible]6 | 3.0% |
| Total N of responses = | 192 | 100.0% | |

### Table 1.3.34
### District Characteristics Important in the Adoption or Development of New Practices, Reported by External Facilitators

Data Source: External Agent General Interview
Content Analysis

N answering question = 88 cases

| | Number of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Must value change/climate for change | 54 | 22.1% | 61.3% |
| Commitment | 50 | 20.5 | 56.8 |
| Administrative leadership | 24 | 9.8 | 27.3 |
| Demographics | 17 | 7.0 | 19.3 |
| Presence of advocate | 14 | 5.7 | 15.9 |
| Money/funds | 14 | 5.7 | 15.9 |
| Communication/interaction | 13 | 5.3 | 14.8 |
| Needs assessment | 11 | 4.5 | 12.5 |
| Staff/socio-emotional concerns | 11 | 4.5 | 12.5 |
| Planning and preparation | 10 | 4.1 | 11.4 |
| Quality staff | 7 | 2.9 | 7.9 |
| Sufficient materials/resources | 7 | 2.9 | 7.9 |
| Student deficiency | 4 | 1.7 | 4.5 |
| Congruence | 3 | 1.2 | 3.4 |
| Other | 5 | 2.1 | 5.7% |
| Total N of responses = | 244 | 100.0% | |

### Table 1.3.35
### Factors Influencing Work of External Facilitators in Local Sites
Data Source: External Agent Site-Specific Interview
Content Analysis

N answering question = 108 cases
N answering "don't know" = 16
N answering "no important features" = 3
Total N of cases = 127

| | Number of responses | Percent of total N of responses | Percent of N answering question |
|---|---|---|---|
| Administrator receptive/ interested (support) | 40 | 17.3% | 37.1% |
| Demographics | 30 | 13.0 | 27.7 |
| Teacher receptive/interested | 27 | 11.7 | 25.0 |
| Administrator involved (behavior) | 26 | 11.2 | 24.1 |
| Teacher drive/internal initiative (motive) | 21 | 9.1 | 19.4 |
| Resources available/in place | 18 | 7.8 | 16.6 |
| Congruence | 15 | 6.5 | 13.9 |
| Teacher involved (behavior) | 13 | 5.6 | 12.1 |
| External agent interest | 9 | 3.9 | 8.3 |
| Good system | 8 | 3.5 | 7.4 |
| Student interest | 3 | 1.3 | 2.8 |
| Required staff available | 3 | 1.3 | 2.8 |
| State/statutory mandate | 2 | .9 | 1.9 |
| Other | 16 | 6.9 | 14.1% |
| Total N of responses = | 231 | 100.0% | |

### Table 1.3.36
### District/Building Start by External Facilitators
### Data Source: External Agent Site-Specific Interview

| | Number of responses | Percent |
|---|---|---|
| Began working with building | 55 | 43.0% |
| Began working with district | 73 | 57.0 |
| N of cases = | 128 | 100.0% |

### Table 1.3.37
### District/Building Start by External Facilitator Role Group
### Data Source: External Agent Site-Specific Interview

| | Began with Building | Began with District | | Total |
|---|---|---|---|---|
| NDN Title I | 25% ( 8) | 75% (24) | = | 100% ( 32) |
| NDN non Title-I (D/Ds) | 40% (18) | 60% (27) | = | 100% ( 45) |
| Title IV-C locally developed projects | 42% ( 5) | 58% ( 7) | = | 100% ( 12) |
| NDN non-Title I (SFs) | 50% ( 8) | 50% ( 8) | = | 100% ( 16) |
| State-administered programs | 70% (16) | 30% ( 7) | = | 100% ( 23) |
| Total N of cases = | 43% (55) | 57% (73) | = | 100% (128) |

### Table 1.3.38
### How the External Facilitator Began Working with the Local Site
### Data Source: External Agent Site-Specific Interview

| | Number of responses | Percent |
|---|---|---|
| Awareness conference | 44 | 34.6% |
| School system contacted external agent -- no awareness | 27 | 21.3 |
| External facilitator contacted school system -- no awareness given | 17 | 13.4 |
| Site training | 14 | 11.0 |
| Contact through third party -- no awareness given | 12 | 9.4 |
| Met at conference | 5 | 3.9 |
| College course with D/D | 3 | 2.4 |
| Other | 5 | 3.9 |
| N of cases = | 127 | 100.0% |

### Table 1.3.39
### Who Initiated Contact?
### Data Source: External Agent Site-Specific Interview

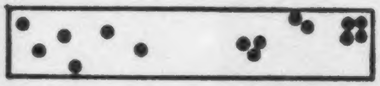
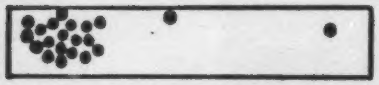
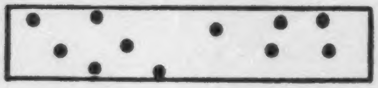
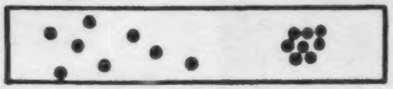
| | Number of responses | Percent |
|---|---|---|
| Local school | 79 | 63.2% |
| External facilitator | 19 | 15.2 |
| Other external facilitator (not respondent) | 21 | 16.8 |
| Other | 6 | 4.8 |
| N of cases = | 125 | 100.0% |

### Table 1.3.40
### Types of Local Site Personnel Initiating Contact with External Facilitators
### Data Source: External Agent Site-Specific Interview

| | Number of responses | Percent |
|---|---|---|
| Program coordinators/directors | 28 | 36.4% |
| Teachers | 14 | 18.2 |
| Principals | 11 | 14.3 |
| Superintendents | 9 | 11.7 |
| Building specialists | 3 | 3.8 |
| Unspecified school person | 12 | 15.6 |
| N of cases = | 77 | 100.0% |

# CHAPTER II

## Table 2.1
## Cohesiveness of School as Reported by Faculty and Principals
Data Sources: Building Work Climate Questionnaire, Administrator Site Questionnaire, and Non-Implementation Version of Administrator Site Questionnaire

| | | | Faculty | | Principals | |
|---|---|---|---|---|---|---|
| | | | Number of responses | Percent | Number of responses | Percent |
| A. |  | *The school is made up of a few tightly knit small groups and several independent, individual teachers.* | 33 | 23.9% | 54 | 35.5% |
| B. |  | *The school is largely one cohesive group of teachers.* | 89 | 64.5 | 65 | 42.8 |
| C. |  | *The school is a collection of independent, individual teachers.* | 2 | 1.4 | 8 | 5.3 |
| D. |  | *The school is made up of a single small, cohesive group and many independent, individual teachers.* | 14 | 10.1 | 9 | 5.9 |
| E. | | *Other -- Please draw.* | 0 | 0 | 16 | 10.5 |
| N = | | | 138 | 99.9% | 152 | 100.0% |

### Table 2.2
### Extent of Staff Rapport
Data Source: Building Work Climate Questionnaire

| Degree of Harmony | Number of responses | Percent |
|---|---|---|
| 1 (low level) | 0 | 0% |
| 2 | 12 | 8.7 |
| 3 | 56 | 40.6 |
| 4 | 50 | 36.2 |
| 5 (high level) | 20 | 14.5 |
| N = | 138 sites | 100.0% |

Mean = 3.6

### Table 2.3
### Responsiveness of Different Role Groups to Concerns of Faculty
Data Source: Building Work Climate Questionnaire

| Role Group | Not At All | Some-What | Moder-ately | Very |
|---|---|---|---|---|
| Local school board | 2.9% | 73.9% | 26.1% | 0.0% |
| Superintendent | 2.2 | 57.9 | 34.1 | 5.8 |
| Your principal | 0.0 | 9.4 | 55.8 | 34.8 |
| Teachers in general | 0.0 | 4.3 | 84.8 | 10.9 |
| A small group of teachers | 0.0 | 13.9 | 83.2 | 2.9 |
| Central office staff | 1.4 | 63.8 | 34.1 | 0.7 |
| Students | 0.0 | 52.2 | 47.1 | 0.7 |
| Parents | 2.2 | 51.4 | 46.4 | 0.0 |
| Teacher unions/ professional associations | 6.5% | 29.0% | 61.6% | 2.9% |

N = 138 sites

## Table 2.4
## Degree of Autonomy Reported by Faculty
Data Source: Building Work Climate Questionnaire

| | Number of responses | Percent |
|---|---|---|
| 1 (low degree) | 1 | 0.7% |
| 2 | 0 | 0 |
| 3 | 2 | 1.4 |
| 4 (moderate degree) | 13 | 9.4 |
| 5 | 68 | 49.3 |
| 6 | 53 | 38.4 |
| 7 (high degree) | 1 | 0.7 |
| N = | 138 sites | 99.9% |

Mean = 5.2

## Table 2.5
## Extent of Problem-Solving Effectiveness Reported by Faculty
Data Source: Building Work Climate Questionnaire

| | Number of responses | Percent |
|---|---|---|
| 1 (low) | 1 | 0.7% |
| 2 | 4 | 2.9 |
| 3 (moderate) | 45 | 32.6 |
| 4 | 78 | 56.5 |
| 5 (high) | 10 | 7.2 |
| N = | 138 sites | 99.9% |

Mean = 3.7

### Table 2.6
### Teachers' Report of Assistance From Teachers Within the School
Data Source: User Questionnaire

| | Fellow Teachers | | Teacher Leaders | |
|---|---|---|---|---|
| | Number of responses | Percent | Number of responses | Percent |
| Not at all (0) | 31 | 10.5% | 77 | 26.0% |
| Sometimes (1) | 248 | 83.8 | 189 | 63.9 |
| Frequently (2) | 17 | 5.7 | 30 | 10.1 |
| N = | 296 | 100.0% | 296 | 100.0% |

| | |
|---|---|
| Mean = 1.0 | Mean = 0.8 |
| S.D. = 0.40 | S.D. = 0.58 |

## Table 2.7
## Existence of an Advocate of the Practice
Data Sources: User Administrator, Local Site External Agent Questionnaires, and External Agent Site-Specific Interview

| | Yes | | No | | Don't Know | | |
|---|---|---|---|---|---|---|---|
| | Number of responses | Percent | Number of responses | Percent | Number of responses | Percent | Total N |
| Users | 253 | 85.6% | 43 | 14.4% | | * | 296 |
| Administrators | 155 | 88.1% | 20 | 11.4% | | * | 175 |
| Local Facilitators | 59 | 78.7% | 0 | 0 | 16 | 21.3% | 75 |
| External Facilitators | 110 | 90.2% | 3 | 2.5% | 9 | 7.4% | 122 |

*For users and administrators, this response was not among their choices.

## Table 2.8
## Position of Primary Advocate Reported by Facilitators
Data Sources: External Agent and Local Site External Agent Site-Specific Interviews

| | External Facilitator | | Local Facilitator | |
|---|---|---|---|---|
| Advocate position | Number of responses | Percent | Number of responses | Percent |
| Program director/ ass't. superintendent | 38 | 31.7% | 28 | 25.7% |
| Principal/assistant principal | 26 | 21.7 | 22 | 20.2 |
| Teachers | 23 | 19.2 | 21 | 19.3 |
| Specialist (building level) | 11 | 9.2 | 9 | 8.3 |
| Specialists (district level) | 10 | 8.3 | 11 | 10.1 |
| Superintendent | 7 | 5.8 | 16 | 14.7 |
| Personnel from other school in district | 2 | 1.7 | 0 | 0.0 |
| Other school district | 2 | 1.7 | 1 | 0.9 |
| School board | 0 | 0.0 | 0 | 0.0 |
| Parents/PTA | 0 | 0.0 | 0 | 0.0 |
| Don't know | 1 | 0.8 | 1 | 0.9 |
| N = | 120 | 100.1% | 109 | 100.1% |

## Table 2.9
## Role of Primary Advocate, Reported by Facilitators
## Data Sources: External Agent and Local Site External Agent Site-Specific Interview Content Analysis

| | External Facilitator | | Local Facilitator | |
|---|---|---|---|---|
| | Number of responses | Percent | Number of responses | Percent |
| Helped acquire/ set-up program | 66 | 55.5% | 33 | 45.2% |
| Leveraged staff/ used influence | 46 | 38.7 | 15 | 20.5 |
| Provided general support | 37 | 31.1 | 30 | 41.1 |
| Communicated with staff | 31 | 26.1 | 35 | 47.9 |
| Planned/scheduled organized | 23 | 19.3 | 14 | 19.2 |
| Attended training | 17 | 14.3 | 12 | 16.4 |
| Need sensing/monitored implementation | 17 | 14.3 | 7 | 9.6 |
| Communicated with external audience | 12 | 10.1 | 20 | 27.4 |
| Provided resources | 12 | 10.1 | 23 | 31.5 |
| Handled paperwork/ wrote proposals | 11 | 9.2 | 13 | 17.8 |
| Made site visits | 7 | 5.9 | 3 | 4.1 |
| Assisted in training directly | 4 | 3.4 | 8 | 11.0 |
| Selected staff | 4 | 3.4 | 7 | 9.6 |
| Provided follow-up assistance | 3 | 2.5 | 8 | 11.0 |
| Other | 0 | 0.0 | 0 | 0.0 |
| N of responses = | 290 | | 228 | |
| N of respondents answering questions = | 119 | | 73 | |

### Table 2.10
### Number of Individuals or Groups Mentioned by Teachers who Endorsed the Practice
Data Souce: User Interview

| | Number of responses | Percent |
|---|---|---|
| 0 | 117 | 41.6% |
| 1 | 97 | 34.5 |
| 2 | 45 | 16.0 |
| 3 | 20 | 7.1 |
| 4 | 2 | .7 |
| N = | 281 | 99.9% |

Mean = 0.9
S.D. = 0.96

### Table 2.11
### Individuals or Groups Mentioned by Teachers Who Endorsed the Practice
Data Source: User Interview
Content Analysis
N answering question = 164
N answering "no endorsement" = 117
Total N = 281

| | Number of responses | Percent of total N |
|---|---|---|
| Other teachers | 55 | 19.6% |
| Administrators | 54 | 19.2 |
| Parents | 51 | 18.1 |
| Other staff | 37 | 13.2 |
| Community-organized groups | 37 | 13.2 |
| School board | 21 | 7.5 |
| External agents | 3 | 1.1 |
| Total N of responses | 258 | |

## Table 2.12
## Kinds of Endorsement Mentioned by Teachers

Data Source: User Interview
Content Analysis

N answering question = 164
N answering "no endorsement" = 117
Total N = 281

| | Number of responses | Percent of total N |
|---|---|---|
| Gave positive feedback | 71 | 25.3% |
| Gave general support | 65 | 23.1 |
| Planned or participated in program implementation | 33 | 11.7 |
| Communicated externally | 30 | 10.7 |
| Provided resources | 23 | 8.2 |
| Used leverage to help | 14 | 5.0 |
| Provided training | 5 | 1.8 |
| Total N of responses = | 241 | |

## Table 2.13
## Number of Kinds of Support Mentioned by Administrators

Data Source: Administrator Interview

| | Number of responses | Percent |
|---|---|---|
| 0 | 13 | 8.1% |
| 1 | 50 | 31.3 |
| 2 | 43 | 26.9 |
| 3 | 33 | 20.6 |
| 4 or more | 21 | 13.1 |
| N = | 160 | 100.0% |

Mean = 2.1
S.D. = 1.49

231

## Table 2.14
## Kinds of Support Mentioned by Administrators
Data Source: Administrator Interview
Content Analysis

N answering question = 150
N answering "no support" = 13
Total N = 163

| | Number of responses | Percent of N answering question |
|---|---|---|
| Gave positive feedback | 103 | 68.7% |
| Participated or planned with staff | 79 | 52.7 |
| Communicated externally | 49 | 32.7 |
| Provided resources | 29 | 19.3 |
| Provided instructional services | 22 | 14.7 |
| Assisted with development | 21 | 14.0 |
| Kept budget | 17 | 11.3 |
| Provided training | 11 | 7.3 |
| Evaluated | 6 | 4.0% |
| Total N of responses = | 337 | |

## Table 2.15
## Kinds of Support Given by Local School Districts, Reported by Facilitators
Data Sources: External Agent Site-Specific Interview and Local Site External Agent Interview Content Analysis

| | External Facilitator | | Local Facilitator | |
|---|---|---|---|---|
| | Number of responses | Percent of N answering question | Number of responses | Percent of N answering question |
| Provided support (general) | 45 | 34.1% | 35 | 44.9% |
| Provided staff/ released time | 35 | 26.5 | 18 | 23.1 |
| Provided materials | 28 | 21.2 | 18 | 23.1 |
| Gave consent | 27 | 20.5 | 18 | 23.1 |
| Provided funds | 26 | 19.7 | 18 | 23.1 |
| Plan/schedule/ organize | 17 | 12.9 | 7 | 9.0 |
| Provided space | 13 | 9.8 | 1 | 1.3 |
| Provided training | 7 | 5.3 | 12 | 15.4 |
| Communicated with staff | 6 | 4.5 | 12 | 15.4 |
| Communicated with external audience | 5 | 3.8 | 5 | 6.4 |
| Leveraged staff | 4 | 3.0 | 2 | 2.6 |
| Assisted/participated in training directly | 3 | 2.3 | 4 | 5.1 |
| Expanded program | 1 | 0.8 | 0 | 0.0 |
| Other | 7 | 5.3% | 1 | 1.3% |
| N of responses = | 224 | | 151 | |
| N answering question = | 132 | | 78 | |

### Table 2.16
### Number of Individuals or Groups Who Opposed the Practice Mentioned by Administrators
### Data Source: Administrator Interview

| | Number of responses | Percent |
|---|---|---|
| 0 | 119 | 72.1% |
| 1 | 34 | 20.6 |
| 2 | 8 | 4.8 |
| 3 or more | 4 | 2.4 |
| N = | 165 | 99.9% |

Mean = 0.4
S.D. = .78

### Table 2.17
### Individuals or Groups Who Opposed the Practice Mentioned by Administrators
### Data Source: Administrator Interview
### Content Analysis

N answering question = 46
N answering "no opposition" = 119
Total N = 165

| | Number of responses | Percent of total N |
|---|---|---|
| Teachers | 37 | 22.4% |
| Parents | 11 | 6.7 |
| Community | 10 | 6.1 |
| Administrators | 9 | 5.5 |
| Students | 7 | 4.2 |
| School Board | 3 | 1.8 |
| Specialists | 2 | 1.2% |
| Total N of responses = | 79 | |

## Table 2.18
## Kinds of Opposition Mentioned by Administrators
Data Source: Administrator Interview
Content Analysis

N answering question = 46
N answering "no opposition" = 119
Total N = 165

| | Number of responses | Percent of total N |
|---|---|---|
| Criticism | 40 | 24.2% |
| Attempt to change the effort | 7 | 4.2 |
| Attempt to cancel the effort | 3 | 1.8 |
| Attempt to subvert the effort | 1 | 0.6 |
| Budget Cut | 1 | 0.6% |
| Total N of responses = | 52 | |

## Table 2.19
## Number of School Improvement Activities Undertaken in the Previous Three Years as Reported by Administrators
Data Source: Administrator Interview

| | Number of responses | Percent |
|---|---|---|
| 1-2 | 37 | 14.3% |
| 3-4 | 82 | 31.7 |
| 5-6 | 59 | 22.8 |
| 7-8 | 42 | 16.2 |
| 9-10 | 20 | 7.7 |
| 11-20 | 14 | 5.4 |
| Over 20 | 5 | 1.9 |
| N = | 259 | 100.0% |

Median = 5.0

### Table 2.20

### Comparison of Amount of Previous School Improvement Activity to That of Other Schools

Data Sources: Administrator and Building Work Climate Questionnaires

| | Implementing Administrators | | School Faculties | |
|---|---|---|---|---|
| | Number of responses | Percent | Number of responses | Percent |
| High | 115 | 67.6% | 37 | 26.8% |
| Average | 53 | 31.2 | 100 | 72.5 |
| Low | 2 | 1.2 | 1 | 0.7 |
| N = | 170 | 100.0% | 138 | 100.0% |

### Table 2.21

### Number of School Improvement Activities Currently Underway As Reported by Administrators

Data Source: Administrator Interview

| | Number of responses | Percent |
|---|---|---|
| 1-2 | 81 | 34.9% |
| 3-4 | 75 | 32.3 |
| 5-6 | 45 | 19.4 |
| 7-8 | 21 | 9.1 |
| 9-10 | 6 | 2.6 |
| Over 10 | 4 | 1.7 |
| N = | 232 | 100.0% |

Median = 3.6

Note: Responses of "same as previous question" (i.e., previous improvement activity) were coded as "missing."

### Table 2.22
### Comparison of Amount of Current School Improvement Activity to That of Other Schools
### Data Sources: Administrator and Building Work Climate Questionnaires

| | Implementing Administrators | | School Faculties | |
|---|---|---|---|---|
| | Number of responses | Percent | Number of responses | Percent |
| High | 94 | 54.7% | 29 | 21.0% |
| Average | 76 | 44.2 | 106 | 76.8 |
| Low | 2 | 1.2 | 3 | 2.2 |
| N = | 172 | 100.1% | 138 | 100.0% |

# CHAPTER III

Table 3.1
Distribution of Practices Among Programs by Purpose

| | NDN | | | | | |
|---|---|---|---|---|---|---|
| | Non-Title I | Title I | BEH | State-Administered | Title IV-C Local Development | Totals by Purpose Category |
| Student basic skill remediation | 2 | 6 | 0 | 4 | 1 | 13<br>(21.3%) |
| Programs for non-regular/ special needs students | 2 | 0 | 3 | 1 | 7 | 13<br>(21.3%) |
| Student process skill/personal development | 4 | 0 | 2 | 3 | 9 | 18<br>(29.5%) |
| Integration of school with outside world | 2 | 0 | 0 | 2 | 5 | 9<br>(14.8%) |
| Materials or processes for regular subject areas | 2 | 0 | 1 | 3 | 2 | 8<br>(13.1%) |
| Totals by Program | 12<br>(19.7%) | 6<br>(9.8%) | 6<br>(9.8%) | 13<br>(21.3%) | 24<br>(39.3%) | 61<br>(100%) |

## Table 3.2
## Distribution of Practices Among Programs by Pedagogical Approach

| | NDN | | | | | |
|---|---|---|---|---|---|---|
| | Non-Title I | Title I | BEH | State-Administered | Title IV-C Local Development | Totals by Pedagogical Category |
| Behavior modification | 1 | 0 | 0 | 0 | 2 | 3<br>(4.9%) |
| Experiential/personal development | 0 | 0 | 2 | 3 | 5 | 10<br>(16.4%) |
| Experiential/content oriented/ teacher directed | 2 | 0 | 1 | 2 | 6 | 11<br>(18.0%) |
| Experiential/Content oriented/ Inquiry | 1 | 0 | 0 | 3 | 3 | 7<br>(11.5%) |
| Diagnostic-prescriptive/ individualized/combination of teacher and student direction | 3 | 3 | 0 | 0 | 5 | 11<br>(18.0%) |
| Diagnostic-prescriptive/ individualized/developmental | 3 | 1 | 0 | 1 | 2 | 7<br>(11.5%) |
| Diagnostic-prescriptive/ individualized/highly teacher directed | 1 | 2 | 3 | 3 | 0 | 9<br>(14.8%) |
| Group oriented/teacher directed | 1 | 0 | 0 | 1 | 1 | 3<br>(4.9%) |
| Totals by Program | 12<br>(19.7%) | 6<br>(9.8%) | 6<br>(9.8%) | 13<br>(21.3%) | 24<br>(39.3%) | 61<br>(100%) |

### Table 3.3
### Practice Characteristic Correlation Matrix

| | Complexity | Implementation Requirements | Size | Prescriptiveness | Precision of Definition | Concreteness of Claimed Benefits |
|---|---|---|---|---|---|---|
| Complexity | 1.00 | .66‡ | .44‡ | .38‡ | .09 | .34 |
| Implementation Requirements | .66‡ | 1.00 | .52‡ | .28 | .12 | .26 |
| Size | .44‡ | .52‡ | 1.00 | .40‡ | .07 | .22 |
| Prescriptiveness | .38‡ | .28 | .40‡ | 1.00 | .36 | .41‡ |
| Precision of Definition | .09 | .12 | .07 | .36 | 1.00 | .30 |
| Concreteness of Claimed Benefits | .34 | .26 | .22 | .41‡ | .30 | 1.00 |

‡This correlation is significant at the .001 level.

# CHAPTER IV

## Table 4.1
## Numbers of Weaknesses or Problems With the Practice
## Data Sources: User, Administrator Site, and Local Site External Agent Interviews

| | Teachers | | Administrators | | |
|---|---|---|---|---|---|
| Weaknesses/ Problems | Individuals (N = 289) | Sites (N = 137) | Individuals (N = 176) | Sites (N = 118) | Local Facilitators (N = 71) |
| 0 | 11% | 8% | 32% | 27% | 9% |
| 1 | 26 | 18 | 30 | 31 | 13 |
| 2 | 26 | 37 | 14 | 12 | |
| 3 | 21 | 26 | 14 | 17 | |
| 4 | 10 | 9 | 6 | 8 | 12 |
| 5 | 5 | 3 | 2 | 3 | 3 |
| 6 | 1 | 0 | 1 | 2 | 0 |
| 7 | 0 | 0 | 1 | 1 | 0 |
| 8 | 1% | 0% | 0% | 0% | 0% |
| Mean | 2.2 | 2.2 | 1.5 | 1.7 | 2.3 |
| S.D. | 1.50 | 1.30 | 1.55 | 1.61 | 1.19 |

## Table 4.2
## Types of Weaknesses or Problems With the Practice
## Data Sources: User, Administrator Site, and Local Site External Agent Interviews
## Content Analysis

| | Percent of Total N Mentioning Item | | | |
|---|---|---|---|---|
| | Teachers (N = 298) | Principals (N = 107) | Superintendents (N = 75) | Local Facilitators (N = 71) |
| Time | 28% | 23% | 19% | 0% |
| Methods | 28 | 10 | 8 | 4 |
| Teacher resistance/ compliance | 26 | 10 | 8 | 4 |
| Management/ coordination | 22 | 16 | 9 | 32 |
| Materials | 17 | 9 | 4 | 6 |
| Communication | 10 | 10 | 7 | 13 |
| Student learning | 10 | 8 | 3 | 6 |
| Staffing | 9 | 11 | 13 | 13 |
| Friction/conflict | 9 | 18 | 16 | 25 |
| Harms student socio-emotional state | 8 | 0 | 0 | 0 |
| Training | 6 | 6 | 9 | 7 |
| Evaluation-assessment | 6 | 5 | 1 | 1 |
| Funding | 6% | 10% | 5% | 10% |

### Table 4.3
Number of Negative Effects (Implementation Difficulties)
Reported by Teachers
Data Source: User Interview

| Negative Effects | Percent of Individuals (N = 294) | Percent of Sites (N = 139) |
|---|---|---|
| 0 | 63% | 58% |
| 1 | 32 | 38 |
| 2 | 5 | 4 |
| 3 | 0.3 | 0 |
| More than 3 | 0.0 | 0 |
| | 100.3% | 100% |
| Mean | 0.4 | 0.5 |
| S.D. | 0.60 | 0.57 |

### Table 4.4
Types of Negative Effects (Implementation Difficulties)
Reported by Teachers
Data Source: User Interview
Content Analysis

| | Percent of Total N Mentioning Item |
|---|---|
| "frustrated and discouraged" | 10% |
| "criticism from teachers" | 7 |
| "parent problems" | 5 |
| "alienated from other staff" | 2 |
| "criticism from administrators" | 1% |

### Table 4.5
Reports of Practice as a Problem Solution
Data Source: User and Administrator Site, and
Local Site External Agent Questionnaires

| | Teachers | | Administrators | | |
|---|---|---|---|---|---|
| | Individuals (N = 256) | Sites (N = 108) | Principals (N = 96) | Superintendents (N = 69) | Local Facilitators (N = 69) |
| Solves problems | 88% | 88% | 89% | 96% | 91% |
| Doesn't address problems | 12% | 12% | 11% | 4% | 9% |

### Table 4.6
### Kinds of Impact Practice Had on Students, Reported by Teachers
### Data Source: User Questionnaire
### Content Analysis

| | Percent of Total N Mentioning Item (N = 296) |
|---|---|
| Student achievement | 52% |
| Student socio-emotional state | 41 |
| Individualized attention | 21 |
| Student-staff relationships, classroom climate | 16 |
| Solves special student problems | 13% |

### Table 4.7
### Number of Student Benefits Mentioned by Teachers
### Data Source: User Interview

| Student Benefits | Percent of Individuals (N = 296) | Percent of Sites (N = 138) |
|---|---|---|
| 0 | 9% | 6% |
| 1 | 24 | 20 |
| 2 | 30 | 38 |
| 3 | 23 | 27 |
| 4 | 10 | 7 |
| 5 | 2 | 2 |
| 6 | 1 | 1 |
| | 99% | 101% |
| Mean | 2.1 | 2.2 |
| S.D. | 1.28 | 1.13 |

### Table 4.8
### Rewards Reported by Teachers
### Data Source: User Interview
### Content Analysis

| | Percent of Total N Mentioning Item (N = 187) |
|---|---|
| Satisfaction, personal growth | 41% |
| Recognition, positive feedback | 22 |
| Professional gains | 16% |

## Table 4.9
## Number of Teacher Rewards Accruing from Practice
Data Source: User Interview

| Teacher Benefit | Percent of Individuals (N = 292) |
|---|---|
| 0 | 36% |
| 1 | 45 |
| 2 | 16 |
| 3 | 3 |
| | 100% |

Mean = 0.90
S.D. = 0.79

## Table 4.10
## Number of Organizational Changes in the Classroom Resulting from Use of the Practice
Data Source: User Interview

| Organizational Changes, Classroom | Percent of Individuals (N = 296) | Percent of Sites (N = 138) |
|---|---|---|
| 0 | 38% | 19% |
| | | 18 |
| 1 | 37 | 27 |
| | | 12 |
| 2 | 20 | 14 |
| | | 4 |
| 3 | 5 | 4 |
| | | 1 |
| 4 | 1 | 2 |
| | 100% | 101% |
| Mean = | 0.95 | 1.01 |
| S.D. = | 0.06 | 0.82 |

Table 4.11
Number of Organizational Changes at the School Level
Resulting from Use of the Practice
Data Source: Administrator Site Interview

| Organizational Changes, School | Percent of All Administrators (N = 176) | Percent of Sites (N = 121*) |
|---|---|---|
| 0 | 40% | 36% |
| 1 | 31 | 30 |
| 2 | 14 | 15 |
| 3 | 11 | 13 |
| 4 | 3 | 4 |
| 5 | 1 | 4 |
|  | 100% | 99% |
| Mean = | 1.1 | 1.2 |
| S.D. = | 1.19 | 1.23 |

*This site-level administrator score was produced by utilizing all principals for whom there were data on the measure, plus superintendents from sites where no principal data were available.

Table 4.12
Percentage of Use of the Practice Among Teachers in the Building
Data Source: Administrator Site Interview

| Percent of Use | Percent of Sites (N = 132) |
|---|---|
| 0-25% | 26% |
| 26-50 | 17 |
| 51-74 | 10 |
| 75-88 | 7 |
| 100% | 40 |
|  | 100% |

## Table 4.13
## Relationship of Percentage of Use and Years Since Adoption
Data Source: Administrator Site Interview

| Percentage of Use | Duration of Use (Years) 1 | 2 | 3 | 4+ | | Total |
|---|---|---|---|---|---|---|
| 0-25% | 8 ( 27%) | 5 (15%) | 6 (31%) | 4 ( 20%) | = | 23 ( 22%) |
| 26-50 | 7 ( 23%) | 6 (18%) | 5 (26%) | 4 ( 20%) | = | 22 ( 22%) |
| 51-74 | 6 ( 20%) | 5 (15%) | 3 (16%) | ( 0%) | = | 14 ( 14%) |
| 75-99 | 1 ( 3%) | 2 ( 6%) | 1 ( 5%) | 5 ( 25%) | = | 9 ( 9%) |
| 100% | 8 ( 27%) | 15 (45%) | 4 (21%) | 7 ( 35%) | = | 34 ( 33%) |
| N = | 30 (100%) | 33 (99%) | 19 (99%) | 20 (100%) | = | 102 (100%) |

## Table 4.14
## General Attitude to School Improvement
Data Sources: Building Work Climate and Administrator Site Questionnaires

| | Faculties | | Administrators |
|---|---|---|---|
| | Percent of Individuals (N = 3058) | Percent of Sites (N = 116) | Percent of Sites (N = 118) |
| Positive (3) | 66% | 34% | 97% |
| (2.5) | 0 | 63% | 0 |
| Neutral (2) | 27 | 3 | 2 |
| Negative (1) | 7 | 0 | 1 |
| | 100% | 100% | 100% |
| Mean | 2.6 | 2.7 | 3.0 |
| S.D. | 0.62 | 0.26 | 0.22 |

## Table 4.15
## Desire for Future Improvement
## Data Sources: Building Work Climate and Administrator Site Questionnaires

| | | Faculties | | Administrators | | |
|---|---|---|---|---|---|---|
| | | Percent of Individuals (N = 2994) | Percent of Sites (N = 116) | Percent of Superintendents (N = 60) | Percent of Principals (N = 107) | Percent of Sites (N = 117) |
| Increased | (1) | 61% | 24% | (1) 53% | 56% | 54% |
| | (1.5) | 0 | 65 | | | |
| Maintained | (2) | 36 | 11 | (2) 47 | 44 | 46 |
| Lowered | (3) | 2 | 0 | (3) 0 | 0 | 0 |
| | | 99% | 100% | 100% | 100% | 100% |
| Mean | | 1.4 | 1.4 | 2.5 | 2.6 | 2.5 |
| S.D. | | 0.53 | 0.53 | 0.50 | 0.50 | 0.50 |

## Table 4.16
## Summary Table for Stepwise Multiple Regression Analysis, Institutionalization (Teacher Perception)

| Variables | F value to enter the equation* | Significance | Coefficient of determination | Contribution of each variable |
|---|---|---|---|---|
| Change in practice | 18.48 | .00 | .16 | .16 |
| Pride in the practice | 6.98 | .01 | .21 | .06 |
| Practice-specific mastery | 4.75 | .03 | .25 | .04 |
| Organizational change: classroom level | 4.73 | .03 | .29 | .04 |
| | | | (R = .54) | |

*Probability value for entering variables was set at .05

### Table 4.17
### Summary Table for Stepwise Multiple Regression Analysis, Institutionalization (Administrator Perception)

| Variables | F value to enter the equation* | Significance | Coefficient of determination | Contribution of each variable |
|---|---|---|---|---|
| Administrator commitment | 12.79 | .001 | .13 | .13 |
| Extent of implementation | 7.56 | .007 | .20 | .07 |
| Plans for continuation | 4.48 | .037 | .24 | .04 |

*Probability value of F for entering variables was set at .05

### Table 4.18
### Summary Table for Stepwise Multiple Regression Analysis, Attitude and Impact Predictors of Attitude Toward Future School Improvement

| Variables | F value to enter the equation* | Significance | Coefficient of determination | Contribution of each variable |
|---|---|---|---|---|
| Net evaluation of the practice | 4.37 | .04 | .04 | .04 |
| Classroom level organizational change | 4.87 | .03 | .08 | .04 |
|  |  |  | (R = .28) |  |

*Set at .05